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AUTHOR Sullivan, Karen Collamore; And Others
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ABSTRACT

Intended for those actively engaged in nonformal education for development, this annotated bibliography contains approximately 300 references to documents that highlight issues concerning food production, distribution, and consumption. It also demonstrates education's role in enhancing developmental efforts to alleviate world hunger. Materials are divided into four sections: issues in agriculture (documents that address the issues involved in the world food crisis), learning about agriculture (materials that focus on the integration of education in agriculture), research and projects in agriculture (references on specific agricultural development projects, organization reports, policy guidelines, methodological issues, overviews of current regional and country-based projects, crop specific research), and agriculture and its natural environment (materials on forestry, soil, water, and wildlife that reflect the interdependency between food production and environmental stability). Each reference is in this format: author or agency, title, publication date, publisher or source organization, annotation, and number of pages. Three additional sections contain annotated references to newsletters and periodicals, a listing of organizations and their addresses, and references (no annotation) to 11 recent acquisitions. (YLB)

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ANNOTATED BIBLIOGRAPHY #10

Non-Formal Education and Agriculture: A Selected Annotated Bibliography

Prepared by
Karen Collamore Sullivan
and the staff of the
Non-Formal Education Information Center

1983

NON-FORMAL EDUCATION INFORMATION CENTER
College of Education, Michigan State University
237 Erickson Hall
East Lansing, Michigan 48824-1034, USA

(517) 355 5522

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This series of Annotated Bibliographies is published by the Non-Formal Education Information Center in cooperation with the Agency for International Development, Bureau of Science and Technology, Office of Education.

FOREWORD

Through its series of Annotated Bibliographies, the Non-Formal Education Information Center seeks to facilitate the sharing of materials among those actively engaged in non-formal education for development. The field of non-formal education is being built not only by a diverse transnational network of researchers and practitioners, but also by persons who are themselves the beneficiaries of non-formal education. For this reason, relevant literature is burgeoning from a variety of sources often eluding those most eager to access it.

This annotated bibliography has been compiled from the resource collection of the Non-Formal Education Information Center and is the tenth in our series.

No. 1 Women in Development

No. 2 Non-Formal Education and Health

No. 3 Literacy and Basic Education

No. 4 Projects, Training, and Strategies for Generating Income

No. 5 Managing Development Projects

No. 6 Children: Health, Education, and Change

No. 7 Non-Formal Education and the Handicapped in Developing Countries

No. 8 Appropriate Technology

No. 9 Nutrition and Food--Education, Policy, and Practice

No. 10 Non-Formal Education and Agriculture

No. 11 Acquiring Financial Resources of NFE Projects

No. 12 Journals and Newsletters on Non-Formal Education and Development

No. 13 Evaluation in Non-Formal Education

No. 14 The Use of Radio in Non-Formal Education

No. 15 Non-Formal Education and the Use and Management of Water Resources

The materials included in this bibliography have been brought to our attention by persons in the worldwide NFE network. We have included full information on document sources to assist readers in acquiring items of interest.

Though many staff members made important contributions to this bibliography, special acknowledgement is due to Milla McLachlan for her excellent conceptual guidance in the early stages, and to Mike DeVries for his assistance in the final stages of writing and editing. Others who deserve mention for their contributions to this bibliography include Louis Rutaremara, Sara Cummins, Sam Oleka, Kaji Shrestha, Lela Vandenberg, Louis Garcia, Doree Mehretu, Evelyn Price, and Pervaiz Amir.

In recognition of others who have contributed to this publication the last page lists individuals who have served on the Center staff between 1976 and 1983.

We welcome suggestions from our readers.

Mary Joy Pigozzi
Director
NFE Information Center

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INTRODUCTION

The range of materials identified in this bibliography reflect the intense concern the issue of global hunger is receiving from agricultural specialists, educators, researchers, as well as governments and national and international development organizations. Clearly, agricultural research and assistance has, and will continue to have, a critical role in improving world food supplies.

But increased food production is only a partial resolution to the problems of hunger now facing many countries. The current world food crisis is a social phenomena and not simply the result of undeveloped agricultural potential and food scarcity. As experiences from research and development projects have demonstrated, hunger and famine result from the complex interaction of social and environmental factors which continually define and re-define the parameters of global food shortages. The effects of international political and economic relations between countries, combined with the impacts of regional climatic changes and loss or depletion of crucial raw materials (such as water, forests and soil) profoundly alter local food availability. Therefore, increasingly it is being recognized that the world community can no longer look only to agriculture for resolutions to the problems of hunger. Attention must also turn to the social factors involved in food production, distribution, and consumption, factors which both contribute to and hinder efforts to alleviate the world food crisis.

Although explicitly recognized as a physical necessity, food is an extremely potent cultural symbol as well. Powerful cultural beliefs often surround food preferences, and frequently food is an important means of defining, solidifying, and maintaining social relations. Moreover, cultural associations linking gender with particular crops often stipulate restrictions regarding who may or may not have contact with certain foods, either through production or consumption (or both), and this is likely to have an impact on the success or failure of development projects attempting to implement changes in methods of agricultural production, or food processing and marketing.

Thus, knowledge about socio-cultural aspects of agriculture, food, and nutrition is important for all involved. In this sense, education is a critical component in any

long-term efforts toward insuring an adequate food supply to feed the world's growing population. What is called for is a re-orientation to food and agriculture, particularly on the part of decision makers, trainers, educators, researchers, and field-workers. For it is only through an understanding of the complex social context as it relates to the agricultural sector that permanent change is likely to occur.

In this bibliography we have tried to demonstrate the complexity of the world food crisis by drawing attention to a diverse range of documents which highlight issues concerning food production, distribution, and consumption. At the same time we have also tried to demonstrate the critical role that education can play in enhancing international, national, and local development efforts to alleviate hunger throughout the world.

1.0 Issues in Agriculture: Contains documents which address the broad and complex issues involved in the world food crisis.

2.0 Learning About Agriculture: Includes materials which focus on the integration of education in agriculture.

3.0 Research and Projects in Agriculture: Contains references on specific agricultural development projects, organization reports, policy guidelines, methodological issues as well as overviews of current regional and country-based projects, and crop specific research.

4.0 Agriculture and Its Natural Environment: Includes materials on forestry, soil, water, and wildlife which reflect the interdependency between food production and environmental stability.

5.0 Newsletters and Periodicals

6.0 Organizations

7.0 Recent Acquisitions

--Karen Collamore Sullivan

1.0 ISSUES IN AGRICULTURE

Agency for International Development (AID/WID). Women in Development at the UN/EAC World Conference on Agrarian Reform and Rural Development. 1979. Office of Women in Development (PPC/WID), Agency for International Development, Department of State, Washington, D.C. 20523, USA.

Believing that the issue of women in development is closely related to issues of agrarian reform and rural development, this packet of materials was prepared by WID/AID for the UN/FAO Conference on Agrarian Reform and Rural Development held in Rome, Italy (July 1979). In addition to a U.S. position paper on "Integration of Women in Development", a series of briefing papers and paper abstracts are included on a variety of topics of importance to women: land reform, agriculture inputs, extension services, non-agricultural employment and organizations. The authors review existing research, identify obstacles women face in rural development and suggest policy implications. 20 pp.

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Bacon, Jean. Food Preferences: Nutrition or Prestige? 1982. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

The importance of basic food preferences is widely recognized by those working with food aid. But the problem of the status value attributed to certain foods and the impacts of such 'prestige' products on world food production and world hunger and poverty are only beginning to be acknowledged. This pamphlet explores factors contributing to changes in traditional patterns of food consumption, and the consequences of 'prestige' foods for diet and health. The consequences include shifting away from nutritionally sound traditional diets in favor of expensive, imported processed foods, thus sacrificing quantity and quality for prestige and convenience. This situation is attributed in part to the food industry's advertising and marketing techniques which have convinced people that "something expensive must be good". The author concludes that in order to encourage healthy and nutritious food consumption, the cultural, political, economic, and historical factors influencing food preferences must be studied and understood. 12 pp.

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Boulding, Elise. Women, Bread and Babies: Directing Aid to Fifth World Farmers. International Women's Year Studies on Women, Paper No. 4. 1975. Program of Research on General Social and Economic Dynamics, Institute of Behavioral Science, University of Colorado, Boulder, Colorado 80302, USA.

Examines the fifth world in Africa as a basis for reallocating resources to reduce hunger and overpopulation. Defining the fifth world as that set of spaces in every society where women carry out their productive roles, the author summarizes women's responsibilities, time commitments, and training opportunities. Identifies a number of resources that, if available, would improve life for women and their families. 44 pp.

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Brown, Lester R. Food or Fuel: New Competition for the World's Cropland. Worldwatch Paper 35. 1980. Worldwatch Institute, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036, USA.

Uncertainties about oil supplies have encouraged a worldwide search for alternative energy sources. The paper discusses technological development and socio-economic implications of the distillation of alcohol for fuel from farm commodities. Describes fuel production experiments using sugar cane, cassava, and molasses that are underway in New Zealand, Brazil, USA, South Africa, and Australia. Concludes that the production of alcohol fuel from crops, while benefitting producers, distillers and the automobile-owning elite, may lead to a rise in food prices and accelerating soil erosion. Recommends, among other things, the creation of a global food-price monitoring system to minimize the adverse effects of current energy-production programs. 43 pp.

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Brown, Lester R., and Pamela Shaw. Six Steps to a Sustainable Society. Worldwatch Paper 48. 1982. World Watch Institute, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036, USA.

The current world-wide rate of population growth, coupled with the decline in available food and energy resources, is leading to increasing concern about the need to implement national and international policies for combating the constant drain on natural resources. This document presents six global environmental problems that need to be addressed to ensure sustainable societies in the future. These include stabilizing population growth by making family planning facilities more readily available to all people; protecting cropland which is currently eroding at an ever increasing rate; replenishing rapidly depleting forests; recycling wastes, a procedure which can be more energy efficient than producing the same substance from natural elements; conserving energy on a continuing basis; and developing renewable energy sources rather than depending on non-renewable resources. 63 pp.

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Center for the Analysis of World Food Issues. A Series of Papers on World Food Issues. 1979. Center for the Analysis of World Food Issues, Cornell University, Roberts Hall, Ithaca, New York 14853, USA.

A collection of 14 brief papers on the current global food situation. The objective of the series is to provide information on different aspects of an overall world problem and to show how they are interrelated. Written by the Cornell University faculty in the agricultural sciences, and compiled by the Center for the Analysis of World Food Issues (Cornell University), the papers cover such topics as water and land resource management, energy use, crop breeding, technology transfer, communication and extension work among farmers, land tenure, national food policies, and international food aid. In addition, paper #15 provides short summaries of papers 1-14, and paper #16 presents an annotated bibliography.

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Chaney, Elsa M. and Martha W. Lewis. Women, Migration, and the Decline of Small-Holder Agriculture. 1980. Office of Women in Development (PPC/WID), Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

The social impact of migration on women who remain behind to manage the home base has received far less attention than the more apparent problems encountered by male members of the family who move. One dimension of this impact can be seen in the decline of small, family operated farms that is currently taking place in many developing countries. This paper explores the effects of migration on women's participation in small-holder farming systems and what this may mean to the future world food supply. Although there are several studies that document women's contributions to farm production and management, the authors contend that the role women play as food producers has yet to be adequately recognized in development planning. In light of the potential demise of small farm systems, the authors examine the relationship between the role women play in food production and the increasing rate of male migration from the rural to the urban sector. 56 pp.

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Chonchol, Jacques. "L'Alimentation Mondiale: L'Echec des Solutions Productivistes." IFDA Dossier. No. 13, November 1979. International Foundation for Development Alternatives (IFDA), 2, Place du Marche, CH-1260 Nyon, Switzerland.

Examining developments in the world food situation since the World Food Conference in 1974, the author finds that hunger and malnutrition have increased, in spite of the Conference's resolution to eliminate them by 1985. He contends that financial and technical investment in agriculture, the principle strategy proposed by the Conference, cannot alone solve the hunger problem, especially when exports and the production of 'prestige' foods are not curtailed; when better facilities for food storage and distribution are not provided; and when employment opportunities are not increased. In conclusion, the author outlines the requirements of a successful food policy, stressing the importance of understanding specific local contexts, and ecological and cultural factors. He also insists that any food policy must be supported by strategies for increasing rural income and employment, and "by an international framework which prevents the rich, industrialized countries from draining away a large part of the world food production in wasteful over-consumption." In French, with summaries in English and Spanish. pp. 43-56.

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Dulansey, Maryanne L. Can Technology Help Women Feed Their Families? Post Harvest Storage, Processing and Cooking: Some Observations. 1979. Consultants in Development, 2130 P Street, N.W., Suite 803, Washington, D.C. 20037, USA.

In a paper prepared for the AAAS Workshop on Women and Development, held in Washington, D.C. (March 1979), Dulansey argues that modern technologies which are introduced into rural societies in developing countries often fail because developers do not account for or seriously involve women, the major users of food-related technology, as decision-makers in project planning and implementation. In order to effectively help rural women feed their families, technological innovations must meet two conditions: (1) Women must believe that the technology meets their perceived needs and will work for them, and (2) Women must be able to afford the technology and be convinced of the benefits of their investment. Various illustrations of development projects that have failed because they didn't meet these conditions are cited. 9 pp.

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Fisher, John L. Summary Report on the Conference on Women and Food. 1978. Consortium for International Development (CID), Executive Office, Utah State University, UMC 35, Logan, Utah 84322, USA.

Presents issues and recommendations discussed at a three-day conference on the role of women in meeting basic food needs in developing countries. Includes proposals for enhancing women's participation in projects and suggestions about ways in which private and international agencies can redesign technical assistance programs to better achieve this goal. 32 pp.

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Food and Agriculture Organization of the United Nations (FAO). Food Aid and the Role of Women in Development. 1976. World Food Programme, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

The World Food Programme (WFP) recognizes the need to improve the status of women and increase their participation in the development process; since its establishment in 1962, it has helped millions of women. This booklet gives some examples of the practical ways in which food aid, combined with other forms of assistance, has been used. Health, nutrition, employment, education and training are areas which the WFP has affected. 43 pp.

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Food and Agriculture Organization of the United Nations (FAO). World Conference on Agrarian Reform and Rural Development (WCARRD) Report. 1979. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Report of an international conference held 12-20 July 1979, in Rome, Italy. The goal was to discuss issues related to agrarian reform and to develop global strategies to overcome worldwide rural poverty. The report contains the "Declaration of Principles" and "Programme of Action" adopted by delegates at the close of the conference, and an account of the conference proceedings, including the work of the Commission on National Policies of Agrarian Reform and Rural Development and the Commission on International Policies. 67 pp.

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Food and Agriculture Organization of the United Nations (FAO). Agriculture: Toward 2000. Economic and Social Development Series No. 23. 1981. FAO, Via Delle Terme di Caracalla, 00100 Rome, Italy.

This publication examines prospects for global agriculture and related policy issues up to the year 2000. Focusing primarily on the needs and potentials of developing countries, the report addresses the agricultural challenges facing the world and proposes a strategy for the development of world agriculture. Three alternative scenarios are presented: 1) continuation of existing trends which would widen the gulf between the haves and have nots leading to a massive increase in undernutrition, 2) moderate improvements in cereal self-sufficiency and general production which would leave unsatisfactory living conditions in most developing countries, and 3) a rapid increase in agricultural production and gross domestic product which would double agricultural output by the year 2000 and improve nutritional standing measurably. While even scenario three will not totally eliminate undernourishment, it would provide for significant improvements. Included in the study are the development strategies behind both scenarios two and three, as well as numerous tables and charts indicating the agricultural status of individual countries with regard to available resources, land use patterns, and various economic growth factors and rates. 160 pp.

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Food and Agriculture Organization of the United Nations (FAO). Food Comes First: World Food Day - 16 October. 1982. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Describes the activities, decisions, and plans undertaken world-wide in conjunction with the first World Food Day in 1981. The document includes details of seminars, competitions, and agricultural projects designed to educate the world's population regarding the need to overcome hunger and malnutrition. Also summarizes long-term projects and ideas for future World Food Days. 34 pp.

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Food and Agriculture Organization of the United Nations (FAO). World Food Problems: The Main Issues in 1982. 1982. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

A bookle. containing two papers which analyze the world food situation. The first discusses issues related to world food security and calls for revived interest in world food problems by industrialized countries. It recommends agricultural investment in developing countries, wider markets and higher prices for goods exported from developing countries, increased multilateral assistance, and strengthening of small local enterprises. The second paper explores the nature and scope of the world food problems, emphasizing their economic causes. It also outlines an "agenda for the developing world", and recommends agricultural expansion, attention to the environment, people's participation, agrarian reform, and the provision of services to the small producers. 34 pp.

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Food and Agriculture Organization of the United Nations (FAO). Rome Declaration on Hunger: Report on the 1982 World Food Day Colloquium. 1983. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Summarizes the discussions of a colloquium of experts brought together to review progress and prospects for the future on the problem of world hunger. Some of the conclusions reflected in the Rome Declaration on Hunger which came out of this conference are that it is possible to feed the world by the year 2000 if governments can find the political will to give absolute priority to feeding the hungry, that the decline in international cooperation for development must be reversed, and that strategies promoting economic growth must be complemented by strategies for attacking the social problems which prohibit the hungry from realizing the benefits of economic growth. The participants propose that the target for the next twenty years be to double food production in developing countries through modernization of the production of food crops, through implementing policies which provide incentive for increasing agricultural production, and through expanding the use of irrigation with sensitivity to environmental impact. All nations are linked in an international economic order and they all must work together in solving global problems. 49 pp.

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George, Susan. An Issues Paper - Contributed by the Food Study Group of the GPID Project. 1979. UNU Project on Goals, Processes and Indicators of Development (GPID), c/o UNITAR, Palais des Nations, CH-1211, Geneva 10, Switzerland; or The United Nations University, 29th Floor, Toho Seimei Building, 15-1, Shibuya 2-chome, Shibuya-ku, Tokyo 150, Japan.

A sharp but carefully reasoned indictment of the capitalist system which, guided by the profit principle, concentrates control over productive resources and food systems in the hands of the few. This has resulted in the decline of self-provisioning agriculture and traditional exchange systems, the increasing marginalization of rural people, and the marked reduction of food available to rural families. In discussing science, scientists, and the hunger problem, the author criticizes so-called 'value free' scientific research and presents a series of guidelines for researchers aiming to serve the poor. These emphasize a holistic approach, a concern with linkages between components of the food system, the importance of traditional knowledge systems, and participatory approaches to research. While advocating 'slow revolution' and building 'countervailing powers' to deal with inevitable political conflict, the author concludes that "greater popular control over food-producing resources and food itself seems... the only viable long-term strategy against hunger." 24 pp.

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Gobezie, Abeba, Zewdi Wolde-Gabriel, and Susan Peel. A Guide to Emergency Feeding. n.d. Ethiopian Nutrition Institute, P.O. Box 5654, Addis Ababa, Ethiopia.

A guide for relief workers organizing emergency feeding programmes. Describes techniques developed by OXFAM and the Ethiopian Nutrition Institute during the famines in Wollo (1973-74) and Ogaden (1975). It discusses methods of food distribution, the relationship between food and malnutrition and the need for a feeding program to help all people affected by disaster (the well nourished, the vulnerable, and the severely malnourished). Includes appendices on preparing high energy foods, protein supplements, and the personnel and equipment needed for such programs. 39 pp.

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Haines, J. Harry. A World Without Hunger. n.d. Church World Service, Division of Overseas Ministries, National Council of the Churches of Christ in the U.S.A., 475 Riverside Drive, Room 620, New York, New York 10015, USA.

Details the relief efforts of the Church World Service during the past decade in areas such as Guatemala, Southern Africa, the Middle East, and Ireland. Describes the immediate relief efforts provided, as well as the long term projects undertaken to help rebuild and further develop areas torn by war or natural disaster. 116 pp.

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Hartman, Betsy and James K. Boyce. Needless Hunger: Voices from a Bangladesh Village. 1979. Institute for Food and Development Policy, 1885 Mission Street, San Francisco, California 94103, USA.

How can a country as fertile as Bangladesh have such severe hunger problems? In answer to this question the authors examine the factors which are forcing land to become increasingly concentrated in the hands of a few as a result of small landholders selling their holdings to buy food. This study suggests that much of Bangladesh's hunger problem is a result of the siphoning off of any profits the poor may make by elite landowners and money-lenders; the underutilization of land, labor, and water; and the allocation, at the national level, of financial resources and skilled manpower for the benefit of a few rather than for the well-being of the majority. The authors do not view Bangladesh's situation as hopeless, however. Social Reconstruction is, according to Hartmann and Boyce, the avenue to alleviating the problem through land reapportionment and cooperative farming. A further recommendation is that donor countries supervise how food aid is distributed within Bangladesh because most food is not now reaching those who need it most. 72 pp.

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Hibler, Michelle. "Less Waste, More Food." IDRC Reports. Vol. 7, No. 2, June 1978. International Development Research Centre (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

Cereals and grain legumes provide the major portion of calories and protein for people in Asia, Africa, and Latin America. However, by 1985 a shortfall in production of 76 million tons of cereal is predicted. Increasing production is one way to diminish the deficit; but despite development efforts, increase in production is not great enough to close the gap. Since estimates indicate that one-fourth to one-third of crops produced in LDC's are lost in harvesting, processing, and storage, improved efficiency at the post-harvest stage could represent substantial gains in grains available for consumption. This article describes three projects which deal with multiple facets of the post-harvesting stage. One, Nigeria's Maiduguri Mill project, began with a survey of the post-harvest system. A consumer-preferences survey later indicated increasing popularity of non-traditional foods and a test kitchen was set up to develop more nutritious food from local flours. A simple mill, including a mechanical dehuller which uses a dry processing cycle, was built. In part due to the extended shelf life of grain which has been dry-processed, recovery rate of the grains was increased to 80%. A local market for the grains was stimulated through consumer education with respect to use of the new products, sale of flour from the mill in the town, and establishment of a local bakery to use the flour there. pp. 19-21.

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Intercom. "Food for All, Teaching Against Hunger." No. 102, 1982. Intercom, 218 East 18th Street, New York, New York 10003, USA.

Comprised of a series of lessons designed to familarize students with the magnitude of global hunger and malnutrition. The lessons include information on what is necessary for good nutrition, what factors contribute to world-wide hunger, and how innovations in farming techniques can both help and hinder the process of eradicating global undernurishment. 40 pp.

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Jackson, Tony, with Deborah Eade. Against the Grain: The Dilemma of Project Food Aid. 1982. OXFAM, 274 Banbury Road, Oxford OX2 7DZ, England, UK.

Project food aid--food which is "distributed free of charge to the poor, either through long-term development projects or in relief operations after disasters and for refugee feeding"--is the subject of this report. In analyzing the impact of food-for-work, supplementary feeding, and other projects, the author concludes that most large-scale food aid development programs do not work, and often have negative impacts on the people they are supposed to benefit. There are many reasons for this. Project food aid stifles initiative and encourages dependency; it undermines local food production; and it is expensive to administer, difficult to manage, and often does not reach those most in need. The author concludes with the recommendation that large-scale food aid be greatly reduced, and that it be used only where it is irreplaceable--for refugees or emergencies, when food is in short supply--since it only aggravates the basic problem which is poverty, not food shortage. 132 pp.

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Kiss, Judit (ed.). Agricultural Development Strategy in the Developing Countries. Institute for World Economics of the Hungarian Academy of Sciences, Studies on Developing Countries No. 103. 1979. Kultura, H-1389 Budapest, P.O. Box 149, Hungary.

This collection of symposium papers examines social, economic, and political complexities as they hamper or increase agricultural development within various Third World countries. Several papers explore the impacts of agrarian reform, while considering such factors as overpopulation, cooperative development, or market development. Others discuss technical modernization and industrial growth as they relate to agricultural development. One paper outlines the current world food situation and sketches the projected extent of food problems in developing countries in the 1980's. 156 pp. (Also available in Hungarian, Russian, French, German, or Spanish.)

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Kutzner, Patricia L. "Women and the Problem of Hunger." Hunger Notes. Vol. 7, No. 8, January 1982. World Hunger Education Service, 2000 P Street, N.W., Washington, .D.C 20036, USA.

Addresses the twin aspects of production and consumption in the world food problem and how they affect the lives of poor women. The author shows that whether farming for subsistence or for market, women's workload has increased with the spread of cash-cropping. Although overall production and income may increase, nutritional levels tend to fall as less land is devoted to subsistence crops. This reduces the variety of foods available and consequently, the quality of the diet deteriorates. Understanding women's food consumption patterns is also important. Nutritional awareness is of little importance if gender-specific eating patterns and poverty prevent women from acting on their knowledge. Instead, the author concludes that efforts must be concentrated on providing practical education concerning foods, habits, and materials that are already within reach of women affected by hunger and malnutrition. pp. 1-6.

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Lappe, Frances Moore and Joseph Collins, with Cary Fowler. Food First: Beyond the Myth of Scarcity. 1978. Institute for Food and Development Policy, 1885 Mission Street, San Francisco, California 94103, USA.

A critical examination of the world-wide policies and politics which are generating and perpetuating hunger today. In a question-answer format the authors address such myths as the scarcity of arable land, the agricultural success of the Green Revolution, the dangers of the population 'explosion', the technological progress spurred by multi-national corporations operating in lesser developed countries, and the benefits of international relief and development aid. Exposing world hunger as resulting primarily from inequality in control over the world's productive resources, the authors hope to counteract the myths of scarcity and hopelessness created by much of the media. 619 pp.

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Lappe, Francis Moore, Joseph Collins, and David Kinley. Aid as Obstacle: Twenty Questions About Our Foreign Aid and the Hungry. 1980. Institute for Food and Development Policy, 1885 Mission Street, San Francisco, California 94103, USA.

Written to enlighten Americans about the often negative impacts of US foreign aid, this book addresses a number of questions concerning world hunger and food aid programs. Convinced that "the root cause of hunger is the increasing concentration of control over food-producing resources in the hands of fewer and fewer people", the authors argue that the only way to eradicate hunger is to work for structural changes in the economic and political systems which reinforce such inequity. This means terminating chronic food aid, since it is not given to countries where hunger is the greatest, much of it benefits rural elites, and most of it is sold to local people at low prices, making it difficult for small farmers to earn a living. In conclusion, the authors underline the importance of educating the public about the forces that maintain hunger in the world, and working with others for structural change. 200 pp.

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Lassen, Cheryl A. Landlessness and Rural Poverty in Latin America: Conditions, Trends and Policies Affecting Income and Employment. Series on Landlessness and Near-Landlessness, No. 4. 1980. Rural Development Committee, Center for International Studies, 170 Uris Hall, Cornell University, Ithaca, New York 14853, USA.

Beginning with the premise that the landless and near-landless laborers are the real rural poor in most developing countries, this study examines the character of rural poverty in Latin America in terms of dimensions, sources, trends, composition, and policies. The results seem to indicate that the poor are not an undifferentiated mass of small-scale farmers, but are a diverse set of small-scale farmers, landless laborers, poor tenants and other people with marginal access to cultivable land. The implication is that rural development projects need to address this multi-faceted nature of rural poverty. Agricultural projects directed only toward developing technological innovations for small-scale farmers may not succeed because a large part of the rural population is ignored. 187 pp.

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Lees, James. Society, Culture, and Agriculture: A Workshop on Training Programs Combining Anthropology and Sociology with the Agricultural Sciences. 1978. The Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036, USA.

Discusses the benefits as well as constraints of integrating social sciences into agricultural development programs. Traditional training programs of anthropology, sociology, and agriculture are reviewed in light of unique perspectives each can offer development programs. Reports from seven universities of their efforts to integrate social science into agricultural training programs reveal increasing emphases on cross-disciplinary and international studies. The report concludes with a consideration of interdisciplinary skills useful for employment opportunities with USAID, US Department of Agriculture, land grant universities, foundations, and the World Bank. 57 pp.

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Leghorn, Lisa and Mary Roodkowsky. Who Really Starves? Women and World Hunger. 1977. Friendship Press Distribution, P.O. Box 37800, Cincinnati, Ohio 45237, USA.

Authors contend that widespread problems of acute hunger are caused primarily by socio-economic factors that limit or deny access to food resources, rather than by technological constraints. Drawing on examples from various cultures, the authors note that women seem to be increasingly affected by malnutrition, particularly in contexts where food taboos and cultural practices favor men in the consumption of priority foods. They further argue that colonialism, the modern cash economy, and a Western model for industrialization have eroded access to food resources that women may have had traditionally, and thus has significantly increased their vulnerability to malnutrition. 40 pp.

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Long, Frank. "The Food Crisis in the Caribbean." Third World Quarterly. Vol. 4, No. 4, October 1982. Third World Foundation, New Zealand House, 80 Haymarket, London SW1Y 4TS, England, UK.

The author asserts that the present food dependency of the Carribean is largely due to neglect of the agricultural sector despite its importance as a development strategy and its potential to satisfy local food needs. Diversification of crops and marketing support to local farmers are seen as key factors in solving the problem. pp. 756-770. (Also of interest, in this issue is "The Politics of Hunger: Review Article" by Christopher Bliss which reviews and critiques six recently published books on food, hunger, and politics. [pp. 771-775].)

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Loutfi, Martha F. Rural Women: Unequal Partners in Development. 1980. International Labour Organisation Publications, International Labour Office (ILO), CH-1200 Geneva 22, Switzerland.

This study acknowledges the productive capacity of women and describes their important role in social production. The author looks beyond commonly held assumptions about women in development, and points out that certain effects of modernization of the economy may bring greater access to employment for men. Because men are usually paid higher wages than women, the economic dependency of women on men may therefore be increased. Though governments tend to recognize the equality of sexes, administrative policies sometimes undermine the status of women. Formalizing land titles, for instance, may mean that property is registered in the names only of males, leaving women without direct access to land. The author states that life prospects differ according to their social positions. In lower classes and castes, where status is earned rather than ascribed, a greater degree of equality exists because women engage in paid employment in addition to housework. In conclusion, Loutfi warns that the acceleration of agricultural production and the entry of women into the wage labor force could increase the present hardship of women, unless corresponding measures are taken to ease their already disproportionate share of domestic work. 81 pp.

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Meals For Millions/Freedom From Hunger. Self-Help for a Hungry World. Annual Report. 1981. Meals for Millions/Freedom From Hunger, 815 Second Avenue, Suite 1001, New York, New York 10017, USA.

Reports on the world wide activities of Meals for Millions' Applied Nutrition Program during 1981. Presents summaries of a number of community based self-help projects aimed at improving the nutritional and health status of the world's poor. Along with a focus on health education, the projects also involve training and the transfer of appropriate food technologies. 15 pp.

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Nicholson, Heather J. and Ralph I. Nicholson. Distant Hunger: Agriculture, Food, and Human Values. 1979. Purdue Research Foundation, West Lafayette, Indiana 47902, USA.

Based on the premise that "any view of the world food situation is inevitably shaped by the values through which the 'facts' are viewed", this book explores the problem of world hunger and malnutrition from four differing perspectives. One perspective asserts that freedom from hunger and malnutrition is a universal human right; that this problem can be erradicated, considering the world's resources, and that this is the responsibility of all countries, especially developed ones. Another, referred to as the new-Malthusian view, defines the problem as over-population and the solution as worldwide birth control. A third view argues that the root of the problem is poverty which is caused by unequal distribution of the world's resources and can only be remedied by a moral commitment to distributive justice. The fourth perspective is economic: food shortages are due to a combination of weather, international food policies, and a lack of incentives for the poor to increase their food production. The authors conclude with a discussion of the responsibilities of both developed and developing countries in locating solutions to world hunger problems. 246 pp.

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Pirie, N.W. "Realistic Approaches to Third World Food Supplies." Third World Planning Review, Vol. 4, No. 1, February 1982. Liverpool University Press, 123 Grove Street, Liverpool L7 7AF, England, UK.

Malnutrition is widespread, and its causes are numerous - ranging from ignorance, to inadequate supply and lack of access to food resources. This article presents several ways of combatting this problem, and criticizes some popular approaches as being unrealistic. The author argues that nutrition can be improved by educating people and communities, though access to food within a country and internationally is a political matter. He criticizes most food aid programs for being politically motivated, creating dependency, increasing rural to urban migration, encouraging a black market, and doing to rather than with people. After outlining some popular but, according to the author, inefficient approaches to malnutrition (such as fish farming), the author suggests that a realistic approach to the problem is to improve the local food supplies by growing foods that will meet the nutritional needs of the local communities. This can be done by educating farmers about nutrition, making food crop production more profitable, and directing research to areas such as farming techniques, mixed cropping, and high protein crops. pp. 31-43.

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Rosenberg, David A. and Jean G. Rosenberg. Landless Peasants and Rural Poverty in Selected Asian Countries. Series on Landlessness and Near-Landlessness. No. 2. 1978. Rural Development Committee, Center for International Studies, 170 Uris Hall, Cornell University, Ithaca, New York 14853, USA.

Describes the conditions of the landless and near-landless rural laborers in Asia who are without adequate farm land or employment for maintaining a subsistence-level lifestyle; who are a majority of the rural labor force; and who are increasing in numbers as land ownership becomes more concentrated. Five country studies provide data on the extent, trends, causes, and conditions of landlessness in Bangladesh, India, Indonesia, Philippines, and Sri Lanka. Sections in the case studies which describe the impact of government policy on the landless rural poor emphasize the problems associated with contradictory policies. 108 pp. (No. 3 in this Series on Landlessness and Near Landlessness by the same authors entitled Landless Peasants and Rural Poverty in Indonesia and the Philippines, 1980, provides more detail on the causes of landlessness and rural poverty in the Philippines and Indonesia. 113 pp.)

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United Nations Non-Governmental Liaison Service. What's Cooking? 1982. UN Non-Governmental Liaison Service (Geneva), Palais des Nations, 1211 Geneva 10, Switzerland.

A collection of materials drawn from various non-governmental organizations intended to raise public awareness about the inter-dependency and links between developed and developing countries. By providing global perspectives on food systems, and the production and use of seed, pesticides, and animal feeds, these short documents illustrate that practices harmful to people in developing countries are frequently just as harmful to people in industrialized countries. 76 pp.

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Weir, David and Mark Schapiro. Circle of Poison: Pesticides and People in a Hungry World. 1981. Institute for Food and Development Policy, 1885 Mission Street, San Francisco, California 94103, USA.

Designed to mobilize concerned people world-wide to stop the use of dangerous pesticides, this book explains the circle of poison and how it effects virtually all people. The circle of poison begins with many US companies flooding the third world market with chemicals that are banned or heavily restricted in the US. These pesticides are then used on crops which are later imported to the United States--still containing chemical residue--which completes the poisonous ring. Not only are those eating the food sprayed with the pesticides in danger of contamination, but those workers, both in the third world and in the US that handle the chemicals face an even greater risk. The authors concentrate primarily on how these chemicals are used in third world countries; how their use is justified by producing corporations; how these justifying arguments fall short of reality; and what can be done to break the circle of poison. Concludes a more democratic process of the majority is necessary, both in the US and elsewhere, to eliminate the problem. 99 pp.

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Whittemore, Claire. Land for People: Land Tenure and the Very Poor. 1981. Oxford Famine Relief (OXFAM), 274 Banbury Road, Oxford OX2 7DZ, England, UK.

Explores the question of land ownership in the Third World. Recognizing the problem of land tenure as central to understanding poverty and deprivation, the author contends that the existing political, economic, and social policies perpetuate the impoverished conditions of the rural poor by supporting unjust land tenure systems. Published by Oxford Famine Relief (OXFAM), the report examines the policies and programs of several international agricultural assistance agencies and suggests that positive contributions to the alleviation of poverty depend on a balanced understanding of the relationship between land tenure, power structures, and the obstacles confronting the landless poor. In addition to numerous OXFAM case histories, the report includes several useful appendices. 55 pp.

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Williams, Maurice J. The Nature of the World Food and Population Problem. Statement for the First Session of the Congressional Round Table, Library of Congress, 1979. Available from the Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

Discusses the world food situation, the role of the World Food Council, and suggestions for increasing food production. The author concludes that the need is for advanced industrial countries to support stepped-up agricultural investments in developing countries. 22 pp.

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Working Group on World Conference on Agrarian Reform and Rural Development (WCARRD). World Conference on Agrarian Reform and Rural Development FAO Rome 1979: Background Papers for the United States Delegation. 1979. Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

A collection of background papers compiled by USAID to provide members of the US Delegation to the 1979 WCARRD Conference with an introduction to basic issues in agrarian reform and rural development. Papers address concerns for increased equity as well as productivity in agrarian and rural societies. Problems identified include governmental over-valuation of their currencies that undermines traditional labor-intensive practices, and the lack of adequate training for rural non-agrarian jobs. Of particular interest is "Women in Development" (Chaney, Simmons, and Staudt) for its discussion of women in agrarian reform and rural development. Critical concerns raised include the lack of awareness about women's current and potential economic contributions to rural sectors; their lack of access to land, water, information, and extension resources; and their exclusion from participation in decisions regarding implementation, benefits, and evaluation of development programs. Suggested solutions include building organizations based on women's existing roles and encouraging separate development organizations for women in instances where cultural traditions prohibit integration of the sexes. Includes a summary of AID policy on agricultural asset distribution for land reform. 154 pp.

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World Food Programme (WFP). Food Aid and the Role of Women in Development. 1976. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Concentrates on how WFP uses food aid to improve the nutritional and ultimately, the socio-economic, needs of women in developing countries. Describes some practical programs in progress which involve the WFP's "project approach", that is, men and women receiving food rations in exchange for participation in development projects. 43 pp.

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Worthington, Linda (ed.). Who's Involved with Hunger: An Organization Guide. (3rd edition). 1982. World Hunger Education Service, 2035 P Street, N.W., Washington, D.C. 20036, USA.

This edition updates the 1979 description of private voluntary, government, and religious organizations involved in hunger related issues. Private voluntary organizations presented are limited to those organizations which serve within the US as major sources of educational materials on global development issues. Listings within the government organizations include the United Nations and multilateral agencies, US Congressional offices, and US Federal government agencies. 54 pp.

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Wortman, Sterling and Ralph W. Cummings, Jr. To Feed This World: The Challenge and the Strategy. 1978. Johns Hopkins University Press, Baltimore, Maryland 21218, USA.

An overview of world food problems written for lay persons and policy-makers. Included in the action strategies for promoting more food production are suggestions for expediting training for agricultural workers and leaders. The authors suggest a dual approach that would directly involve formal and non-formal institutions in development projects and involve projects in training. They also advocate developing management skills that can be used on small farms or for organizational and community development purposes, and helping trainees acquire basic farming skills and appropriate specialized knowledge. 440 pp.

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2.0 LEARNING ABOUT AGRICULTURE

African Training and Research Centre for Women (ATRCW). Workshop on Food Preservation and Storage. 1975. ATRCW, United Nations Economic Commission for Africa (UNECA), P.O. Box 3001, Addis Ababa, Ethiopia.

Deals with the application of appropriate technology in food preservation and storage with a view to improving socio-economic conditions of rural Tanzanians. Also offers suggestions for using food production and preservation industries as a means to generate income for small groups and cooperatives. 102 pp.

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Ahmed, Manzoor and Philip Coombs. Education for Rural Development: Case Studies for Planners. 1975. Praeger Publishers, Inc., 111 Fourth Avenue, New York, New York 10003, USA.

Presents findings of seventeen case studies on the learning needs of rural youth and adults. Of particular interest are the sections that describe a training program for entrepreneurship in small enterprise and industry in India, a multipurpose training program for small farmers in South Korea, a program to train extension leaders for promoting new rice varieties in the Philippines, and an agricultural credit and cooperative program in Afghanistan. 660 pp.

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Alderson, Jeff (ed.). OXFAM Field Directors' Handbook. Revised Edition. 1980. Overseas Division, Oxford Famine Relief (OXFAM), 274 Banbury Road, Oxford OX2 7DZ, England, UK.

Outlines Oxfam's objectives and provides extensive guidelines for field staff and project leaders. In addition to the introductory sections, which include a new guide to project design and assessment, the handbook contains guidelines on agricultural, health, social development, and humanitarian programs and disaster relief. Most sections conclude with detailed bibliographies and a checklist of questions for project planning and evaluation. 454 pp.

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Araujo, Jose Emilio. "Adult Education, Food and Development." Convergence. Vol. 13, No. 4, 1980. International Council for Adult Education, P.O. Box 250, Station F, Toronto, Ontario M4Y 2L5, Canada.

This article focuses on the interrelationships between adult education, food, and development in light of "the unrelenting deterioration of the development process in the agricultural sector." The author presents two approaches to education for development, one in which advances in technology dictate the types of education needed, and the other in which adults learn to define and build their own conception of development. Araujo concludes that adult education is a key factor in development, but that it must be integrated with other efforts. pp. 41-54.

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Association of Faculties of Agriculture in Africa and German Foundation for International Development. Intensive Training Course on Teaching and Learning for Higher Agricultural Education: Course-Description and Evaluation-Report. 1978. Deutsche Stiftung fur Internationale Entwicklung, Simrockstrasse 1, Postfach 10 05 18, 5300 Bonn 1, West Germany.

Outlines the planning procedure and format of an intensive course for instructors from African institutions of higher agricultural education, held in Nairobi, Kenya, in 1978. The goals of the course were to gain better understanding of teaching and learning principles and techniques, to become familiar with a variety of teaching methods, and ultimately to enhance student performance and teaching efficiency. Of particular interest is the extensive evaluation conducted at the end of the course which served to introduce participants to a variety of evaluation techniques. The report outlines the procedures used to evaluate each phase, summarizes strengths and weaknesses of the course, and presents recommendations for future training courses. 69 pp.

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Attfield, Harlan H.D. How To Make Fertilizer. IVS Technical Bulletin No. 4. 1978. International Voluntary Services, Inc. (IVS), G.P.O. Box 344, Dacca, Bangladesh.

An illustrated step-by-step guide for making natural fertilizer (compost pile). Includes a list of readily available waste materials that can be used. Text is in English and Bengali. 14 pp.

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Attfield, Harlan H.D. and James A. Archer. First Lessons in Duck Raising. International Voluntary Services (IVS) Technical Bulletin No. 2. 1978. IVS, G.P.O. Box 344, Dacca, Bangladesh.

A how-to manual based on the experience of IVS volunteers in helping local farmers in Feni, Bangladesh, raise ducks for food and extra income. Includes step-by-step guidelines for selecting and purchasing ducks, hatching eggs, caring for ducklings and preventing diseases. In English and Bengali. 48 pp.

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Barwell, Cyril. Farmer Training in East-Central and Southern Africa. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

A manual designed to provide practical guidance to the extension and teaching staff of agencies involved in rural development in East-Central and Southern Africa. Particular attention is focused on the information and training needs of small farmers. Dealing primarily with residential farmer training centers, the author provides valuable information on topics ranging from setting up and staffing a training center, planning course programs, and recruiting farmers, to financing and evaluating the center. Includes a list of recommendations and appendices providing details of training centers operating in the region. 115 pp.

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Belloncle, Guy. "Literacy for What: Some Lessons from Africa." Ceres. Vol. 13, No. 1. January-February 1980. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Questions the assumption that one must be literate to produce more or adopt new practices. Urges project planners to consult with farmers before designing literacy programs. The author suggests that literacy can serve several functions for African peasants: through figures, it can give farmers and extension workers a common language; it can enable peasants to express themselves and cope with outside forces; and it may be a means of preserving traditions. pp. 33-36.

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Belloncle, Guy. Non-Formal Education and Farm Cooperatives in West Africa. Occasional Paper #8. 1982. Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

The author's analysis of the problems encountered in the West African cooperatives movement are seen in two case studies, one in Senegal, the other in Mali. The Senegelese cooperatives were designed for two functions--credit and marketing, but failed in both areas due to economic and sociological reasons, as well as simple technical problems. The Malian cooperative provides a success story that points to the importance of: 1) establishing the cooperative at the village level for economical and sociological reasons, 2) creating accounting systems in African languages and providing training programs in their use, and 3) tailoring non-formal education to meet local needs. The author discusses briefly the limited participation of women in West African cooperatives and points to both sociological and economic reasons for this. He provides an example of women's beginning interest in the government's cooperatives when the women perceive their own bargaining power. 32 pp.

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Bembridge, T.J. Agricultural Extension: The Key to Rural Development in the Present and Former Homelands. 1978. Professor T.J. Bembridge, Fort Hare University, P/B X1314, Alice, Republic of South Africa.

An overview of agricultural and rural development in the Homelands of South Africa. The author argues that decline in food production stems from planning that did not take into account "grass-roots" socio-economic problems. He suggests a multi-disciplinary research approach and an agricultural extension effort that would address the whole system (i.e. the farmers, organizations that support them, and their physical and social environments). 50 pp.

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Benor, Daniel and James Q. Harrison. Agriculture Extension. The Training and Visit System. 1977. The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, USA.

Proposing that a reformed extension system can improve farming conditions and the productivity of small farmers, this booklet discusses a simple and low-cost extension program based on intensive training of village extension workers and frequent visits by the workers to the farmers' fields. Gives an overview of the organization of such a system and guidelines for its implementation and evaluation. The impact of the system on farmers is illustrated in three case studies. 55 pp.

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Bond, C.A. Discussion Paper on Agricultural Extension for Women. 1977. Ministry of Agriculture, Private Bag 003, Gaborone, Botswana.

Traces two years of agricultural extension efforts directed towards women in Botswana. Of particular interest are the sections which summarize women's training programs, the ways training relates to the problem of integrating women into present extension programs, and the barriers that make it difficult for fieldworkers to reach women. 11 pp. (Also available from the Ministry of Agriculture is a related document, Evaluation of Female Field Staff in the Ministry of Agriculture, n.d. 6 pp.)

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Botswana. The Mochudi Toolbar: Makgonatsotlhe, The Machine Which Can Do Everything. 1975. Agricultural Information Service, Ministry of Agriculture, Private Bag 003, Gaborone, Botswana. Distributed by Mochudi Farmers Brigade, Box 208, Mochudi, Botswana.

Describes an agricultural implement which performs all the conventional steps of dryfarming tillage, as well as some less conventional operations. A separate booklet Makgonatsotlhe: Mochudi Toolbar gives a complete set of plans drawn to scale for the chassis, planter unit, fertilizer applicator, and accessories. 17 pp.

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Boukli, Noureddine and the Institute Staff. Mostaganem Institute of Agricultural Technology: An Educational Innovation. Experiments and Innovations in Education No. 19, International Bureau of Education Series. 1975. Unesco Press, 7 Place de Fontenoy, 75700 Paris, France.

Case study of Algeria's Institute of Agricultural Technology and its four year training program for agricultural engineers. Describes the training provided, how it is organized, and various innovative aspects of the course. Explains the importance of field training in terms of the overall program, and points out problems encountered thus far. 46 pp. (Also available in French and Spanish.)

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Bulacan Farmers' Training Center (BFTC). Non-Formal Education Program: A Neglected Area of Developmental Change: The Bulacan Case. Technical Report. 1977. BFTC, Training and Specialist Support Services, University Extension Center, University of the Philippines at Los Banos, College, Laguna, The Philippines.

This report documents the historical development of the Bulacan Farmers' Training Center and explores farmer graduates perceptions of their role as change agents in an effort to assess the impact of non-formal education on rural communities of the Bulacan region. Based on the positive effects of the Training Center, the future potential of non-formal education is examined in light of rural development efforts throughout the Philippines. 118 pp.

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Bunch, Roland. Two Ears of Corn: A Guide to People-Centered Agricultural Improvement. 1982. World Neighbors, 5116 North Portland, Oklahoma City, Oklahoma 73112, USA.

Drawing on his own experiences and those of other World Neighbor practitioners, the author presents a very readable and useful guide to conducting small-scale agricultural improvement projects. He notes that small local-level projects can make a unique contribution to small farmer agricultural improvement in that they can be designed to meet the specific needs of particular cultural groups and can draw from and build upon existing local resources (such as traditional knowledge and leadership, and indigenous forms of organization). The local focus further enables such projects to remain culturally sensitive to the community and flexible enough to respond creatively to changing needs as they occur. Beginning with the planning of a project, the author discusses several approaches, relevant to various stages in a project, that have been used in the field. 250 pp.

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Byrnes, Kerry J. Impact of a Training Program on Participant's Mastery of Fertilizer-Related Subject Matter: An Evaluation of a Fertilizer Marketing and Distribution Course. 1979. Agro-Economic Division, International Fertilizer Development Center, P.O. Box 2040, Muscle Shoals, Alabama 35660, USA.

As investments in agricultural and rural development increase, the demand for trained personnel, particularly skilled technicians and effective managers, also increases. In response to this demand, organizations and educational centers involved in agricultural development activities have placed a high priority on training programs designed to prepare professionals to competently fulfill their technical responsibilities within their respective countries. This document describes the development of an evaluation testing procedure to assess the degree of success of the Fertilizer Marketing and Distribution (FMD) course conducted by the International Fertilizer Development Center (IFDC). The author outlines the testing procedure and methods, discusses the results, and identifies areas where the course could be strengthened. 32 pp.

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Castillo, Gelia T. Beyond Manila: Philippine Rural Problems in Perspective. 1979. International Development Research Center (IDRC), Box 8500, Ottawa K1G 3H9, Canada.

A compilation of papers that present research findings on various rural development issues in the Philippines. Written from a Filipino vantage point. Providing both rural and urban perspectives, problems associated with inequality, unemployment, income generation, education, economic development, social structure, and internal migration are explored. The roles and status of farmers, farm labourers, women, rural youth, the family and the household in Philippine society are discussed. In addition, the interaction of Philippines society with regard to facilitating development through technology transfer is analyzed along with prospects for the future for all of these problems. The appendix includes extensive statistical information. 420 pp.

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The Church of Jesus Christ of Latter-Day Saints. Teaching Personal and Family Preparedness: Financial and Resource Management Home Production and Storage. Vol. II. 1978. The Church of Jesus Christ of Latter-Day Saints, Salt Lake City, Utah, USA.

One of a series of four teaching guides dealing with various topics related to personal and family preparedness. Of special interest are sections on food storage and home gardening which outline, with illustrations, basic techniques in these areas. 154 pp.

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CODEL, Inc. Simple Assessment Techniques for Soil and Water. 1980. CODEL, Environment and Development Program, 79 Madison Avenue, New York, New York 10016, USA.

This workbook provides a number of quick, low-technology environmental tests for measuring soil acidity, soil texture, soil drainage, general mineral content of water, sodium content of irrigation water, irrigation suitability of environmental conditions, and water contamination by coliform bacteria. While not intended to replace sophisticated environmental analyses, these simple tests can provide project planners with useful preliminary assessment techniques. 31 pp.

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Crouch, Bruce R. and Shankariah Chamala (eds.). Extension Education and Rural Development. 1981. John Wiley and Sons, Inc., 605 Third Avenue, New York, New York 10158, USA.

This two-volume collection of papers is a valuable reference work on agricultural extension and community development in developing and developed countries. Based on the case studies and empirical research findings from 29 countries presented in the two volumes, the editors provide guidelines for persons involved in rural development. They emphasize cultural sensitivity and a sense of social responsibility on the part of change agents, and stress the importance of ongoing research and evaluation in programs in rural communities. Volume 1, International Experience in Communication and Innovation (337 pp.), presents a theoretical overview and several case studies on issues in communication and educational methods, and social and cultural factors encountered by change agents. Volume 2, International Experience in Strategies for Planned Change (311 pp.), examines the theoretical foundations of and practical strategies used in fostering change in rural communities. Several case studies take a critical look at extension programs and the use of mass media in rural development. A comprehensive guide for fieldworkers, administrators, policymakers, teachers, and students.

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Cuyno, Rogelio V., Zenaida Ubaldo, Emmanuel Genio and Celia Correa. A Non-Formal Education Strategy for Agricultural Development: The Case of the Bulacan Farmers' Training Center. Occasional Paper No. 5. 1982. NFE/WID Exchange-Asia, University of the Philippines at Los Banos, College, Laguna, Philippines.

Orienting its services towards "behavioral changes related to the needs, problems, goals and interests of the learner", the Bulacan Farmers' Training Project (BFTP) seeks to assist farmers in improving their rice crops and treating their livestock when ill. The non-formal education curriculum offered by the BFTP is prepared with the assistance of various technical agencies and combines demonstrations, practical experience, and various forms of media. Also included in the BFTP is a technician training program which enables specially trained farmers to work in the rural banks assisting other farmers with their farming budgets. 12 pp.

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Daines, Samuel R. with Bryant Smith, William L. Rodgers, and Fred Mann. Agribusiness and Rural Enterprise Project Analysis Manual. 1980. Agribusiness Division, Office of Agriculture, Development Support Bureau, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

AID produced this management guide for its project personnel involved in agribusiness and rural enterprise projects. The practical, field-oriented manual provides background information on AID development philosophies and on methodology for project analysis. Methodological topics addressed include: project identification, feasibility studies, cost-benefit analysis, data gathering, implementation and monitoring, and evaluation. 177 pp.

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Davidson, John R. The Basic Village Education Project in Guatemala. Case Studies in Development Assistance No. 2. 1976. Development Studies Program, Manpower Development Division, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

A case study summarizing the experiences of the Basic Village Education (BVE) Project in using radio education to alter the agricultural knowledge, attitudes, and practices of small farmers. Of particular value is the description of BVE's built-in evaluation component to enable measurement of project impact during its life. Impacts of radio only; radio with local "monitor"; and radio, monitor, and agronomist providing technical expertise were all assessed with regard to their effectiveness to promote change. As a control, measurements were also made in areas where there was no planned introduction of new information and where only a monitor was used to share new agricultural information. It was found that, in general, knowledge and attitudinal changes were significantly more frequent in experimental than control areas and that radio programs and the presence of a monitor clearly contributed to changes in knowledge, attitudes, and behavior, whereas the impact of an agronomist was not so clear. 58 pp.

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De Pedro, Freddie B. Seven Steps to Increasing Rice Production. 1978. International Voluntary Services (IVS), G.P.O. Box 344, Dacca, Bangladesh.

A basic guide for agricultural extension workers to help farmers increase rice production by the use of high-yielding varieties. Provides step-by-step guidelines for seed selection and preservation, germinating and transplanting, land preparation, fertilizer application, crop care, harvesting, and drying. 51 pp. (Also available in Bengali.)

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Dey, Jennie. Information Needs of Staff of Agricultural Extension Services. 1977. Agricultural Extension and Rural Development Centre, University of Reading, London Road, Reading RG1 5AQ, England, UK.

Discusses the development of the Information Service, after the need for such a service was established through a survey conducted among former students of the Centre. Among other things, the survey results indicated a need for literature dealing with the practical application of theories about planning, coordination, and communications. Topics to be covered in pamphlets from the Centre include coordination between agencies, objectives and methods of projects, project evaluation, and use of media. Concludes that the Information Service should attempt to establish two-way communication with field workers. 42 pp.

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Dikshit, Kiranmani, Ian Boden, Clifford Donkor, Simeon Bonzon, Hernando Bernal-Alarcon, Jaroslav Kostal, and Glenn Powell. Rural Radio: Programme Formats. Monographs on Communication Technology and Utilization, No. 5. 1979. Unesco, 7 Place de Fontenoy, 75700 Paris, France.

An overview of the creation, organization and production of seven rural radio programs in Nepal, Papua New Guinea, Ghana, Colombia, Philippines, Czechoslovakia, and Canada, representing different methods of informing the rural population about farm techniques, organization and general rural development. Aimed at rural radio producers, agricultural field agents, and communication students, the monograph provides information on the origins of these programs, practical advice for broadcasters, and suggestions for adapting program formats to different situations. Formats presented include dialogues, dramas, the farm forum, and magazine programs. 94 pp.

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Dock, Shirley J. Case Studies of Community-Based Nonformal Education in Zimbabwe 1981. Interim Report on Nonformal Education Research Project. 1981. Institute of Adult Education, University of Zimbabwe, P.O. Box MP 167, Mount Pleasant, Harare, Zimbabwe.

A collection of 18 case studies of community-based nonformal education programs in Zimbabwe spanning the fields of agricultural extension, cooperative education, adult literacy, community development, health education, women's education, and appropriate technology. More than a third of the studies report on various aspects of agricultural extension. The Master Farmer Scheme, for example, was one of the ways devised to introduce farmers to modern farming methods by training them to become models and teachers of their neighbors. Another study describes a participatory approach whereby the extension agent organizes and advises farmers but lets them define their problems and formulate solutions. Yet another case study focuses on male migrant workers living in an urban setting who take evening courses in areas such as intensive farming and financial management. It is expected that these farmers would then go back and improve their farms, and perhaps also encourage their wives to attend similar classes. 175 pp.

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Ellman, A.O. and E.T.S. Pillai (eds.). Training for Agricultural Project Management. Papers from a Commonwealth Workshop, Colombo, Sri Lanka, 1979. 1980. Food Production and Rural Development Division, Commonwealth Secretariat, Marlborough House, Pall Mall, London SW1Y 5HX, England, UK.

A collection of papers presented at the Commonwealth Workshop on Agricultural Management Training held in Sri Lanka in 1979. The papers identify and analyze important elements of agricultural project management; review managerial training programs of selected agencies; and provide guidelines on how different organizations, such as governments, private institutions, and international organizations, can help meet needs identified through the workshop. The primary objective of the workshop was to prepare and organize practical and useful procedures for agricultural management training. Topics covered in the collection include curriculum development for training in social management; teaching and learning methodologies; preparation of teaching materials for project management; development of institutions for management training; and training for agricultural project management. Also provided is an elaborate list of recommendations for follow-up action by governments, technical-assistance organizations, training institutions in developed countries, and project-funding organizations for purposes of ensuring that management training needs are identified and the best ways of meeting them are devised. The collection should give agricultural project designers and managers useful ideas which could be incorporated into training programs. 185 pp.

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Fienup, Darrell F. and Harold M. Riley. Training Agricultural Economists for Work in International Development. 1980. Agricultural Development Council, 1290 Avenue of the Americas, New York, New York 10010, USA.

Presents the results of a study on the role of universities in the United States in providing training for students from developing countries who are preparing for careers in international agricultural development. Sponsored by the American Agricultural Economics Association (AAEA), data for the study came from questionnaires and interviews with Third World alumni of US graduate programs in agricultural economics. Along with an evaluation of such training by professionals from developing countries, the report includes a discussion of the status of agricultural economics in Third World countries and the US response to professional needs in this field. In the final section of the report, several issues are identified and recommendations made as to the future role of US institutions in training for international development. 134 pp.

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Food and Agriculture Organization of the United Nations (FAO). Education and Extension Communication. 1974. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

A collection of documents intended to stimulate local preparation of visual aids for use by educators and extensionists working in projects concerned with agriculture and rural development. Included in the package are three monographs which discuss extension teaching methods for group presentations, mass media approaches, and educational campaigns, respectively; a number of examples of technical information fliers for agriculture and rural development; and a fold-out kit describing a systematic method for producing visual aids using mechanical processes of photographic enlargement and reduction, and offset printing. 29 pp. (Also available in Spanish.)

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Food and Agriculture Organization of the United Nations (FAO). Small Farmers Development Manual. Vols. 1 and 2. 1979. FAO Regional Office for Asia and the Far East, Phra Atit Road, Bangkok 2, Thailand.

A manual for project planners and extension workers in Asia. Volume 1 (206 pp.) explains how to form grassroot organizations to foster self-reliance among small farmers, small fishermen, and peasants. Also includes guidelines for low-cost production through group action, covering rice production, livestock raising, low-cost technology for irrigation, and fisheries and aquaculture, as well as a section on farm women's income-generating activities. Volume 2 (78 pp.) directed at planners and administrators, discusses the Field Workshop as a method whereby the rural poor can be actively involved in development projects.

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Food and Agriculture Organization of the United Nations (FAO). Population Concepts in Agricultural Cooperative Training Courses. 1980. FAO Population Programmes, Via delle Terme di Caracalla, 00100 Rome, Italy.

Intended for agricultural cooperative trainers, this document suggests ways of incorporating a population education component into training courses to help acquaint cooperative leaders and members with the relationship between population growth and available resources. Population concepts and communication techniques for use in conveying these concepts are presented. 49 pp.

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Food and Agriculture Organization of the United Nations (FAO)/International Labour Organization (ILO)/Unesco. Training for Agriculture and Rural Development. Economic and Social Development Series, No. 14. 1978. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

A collection of articles examining various issues in agricultural education and training development. Among the topics discussed are the educational and training needs of the rural poor, the involvement of farmers in the planning and evaluation of agricultural extension programs, and the role of management training in agricultural development. Also includes an article on training for improved marketing of food and agricultural products and a report on apiculture in Tunisia. 106 pp.

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Food and Agriculture Organization of the United Nations (FAO), Philippines National Nutrition Council, Philippines Ministry of Agriculture, and University of the Philippines at Los Banos. Food, Nutrition and Agriculture: Guidelines for Curriculum Content for Agricultural Training in the Philippines. 1982. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Provides lesson plans for incorporating nutrition curriculum content into agricultural training. Intended for use in the pre-service or in-service training of agriculturalists, agriculture educators, or agriculture extensionists, these guidelines focus on learning about the relationships between agriculture, food, and nutrition; concepts of nutrition and nutritional characteristics of specific foods; nutritional needs and signs of nutritional deficiencies; food processing and storage systems, and nutritional consequences; methods for extending nutrition education to rural populations, and strategies for planning, implementing, and evaluating agriculture projects directed at improving nutritional status. The lesson plans specify performance objectives, describe lesson content, provide practical notes for teachers, and may suggest additional activities related to the topic. 204 pp.

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Garcia, Oswaldo. Chiclayo: History of a Peasant Training Project in Peru. Freedom from Hunger Campaign/Action for Development: Experiences and Results No. 8. 1979. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy; or FAO Regional Office for Latin America, Casilla 10095, Santiago, Chile.

Describes the establishment of CEDESCA, a center for the Development of the Rural Masses in Agricultural Zone II in Peru. Discusses the peasant training programs developed, problems encountered, and significant achievements of the project. The author concludes that the Center succeeded in directing its training to the needs of the peasants, and served as a model for similar agricultural zones in Peru and elsewhere. 35 pp. (Also available in French and Spanish.)

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Halim, Abdul. Contribution of Schooling and Extension to Agricultural Production and Time Utilization by Farm Operator. 1980. Graduate Training Institute, Bangladesh Agricultural University, Mymensingh, Bangladesh.

Describes a study conducted in three Bangladesh villages. Findings of the study conclude that there is a positive relationship between amount of formal schooling and farm size, value of fixed capital, amount spent for family health and education needs, and net farm family income. The study suggests that the number of extension contacts increases the diffusion of innovations but does not necessarily increase farm income or production levels. 41 pp.

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Hatch, John K. A Record Keeping System for Rural Households. MSU Rural Development Series Working Paper No. 9. 1980. Department of Agricultural Economics, Michigan State University, East Lansing, Michigan 48824, USA.

Describes the development of a record-keeping/information system which can be used by non-literate farmers as an aid in production decision-making. Most models of decision-making in rural development projects involve a process by which information is collected and project decisions are made by outsiders with little participation of farmer households. As an alternative to outsider-controlled information systems, the author describes several "farmer-controlled data collection instruments" (which employ graphics and symbols) as a means by which non-literate farmers can gain initial access to information and participate directly in development decisions effecting their lives. 22 pp.

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Hatch, John R. "Peasants Who Write a Textbook on Subsistence Farming: Report on the Bolivian Traditional Practices Project." Rural Development Review. Vol. 2, No. 2, Winter 1981. Rural Development Committee, Cornell University, 170 Uris Hall, Ithaca, New York 14853, USA.

Outlines a project undertaken by farmers from the highlands of Bolivia and later expanded to include some households from the tropical lowlands, in which each household participates in the recording of traditional crop and livestock related tasks. A daily journal, kept by each family, contains a detailed account of each members activities. As the project progressed participants also included descriptions of tasks relating to family diets and child birth practices, as well as celebrations, political, and religious activities. The outcome of the project is to be a detailed and illustrated textbook describing traditional farming practices based on the daily diaries and written by the participants. pp. 17-20.

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Hawkins, H.S. "An Extension Training Project in Indonesia." ASPBAE Courier Service. No. 7, June 1977. Asian South Pacific Bureau of Adult Education (ASPBAE), Centre for Continuing Education, Australian National University, P.O. Box 4, Canberra, A.C.T. 2600, Australia.

Reports on a four-week training program conducted in Indonesia for university staff members responsible for agricultural extension training. Describes how a small-scale village level extension project was built into the program in order to make training as relevant as possible. pp. 28-30.

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Hawkins, H.S., and C.G. Webb (eds.). Melbourne Notes on Agricultural Extension. No. 15. December 1978. School of Agriculture and Forestry, University of Melbourne, Parkville 3052, Australia.

This document is part of a series that deals primarily with applied agricultural extension. Articles included in this issue examine such topics as the extension potential of rural service clubs, selected issues in the development of extension programs, and using performance records for selecting and managing beef herds. 71 pp.

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Hermann, Hans and Alex V. Hildebrand (eds.). Sixth Training Course: Rural Mechanization and Extension. 1981. University of Kassel, Faculty of International Agriculture, Centre for Professional Studies, 3430 Witzenhausen, West Germany.

A series of seminar papers addressing special concerns of rural mechanization, agricultural extension, and appropriate technology in Germany and developing countries. Discusses the feasability of mechanization in relationship to energy input, alternative energy sources, and the socio-economic and political impacts of mechanization. Considers rural extension cooperative planning, problem-solving techniques, and other teaching methodologies. 121 pp.

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Hung, T.J. Strategy for Village Development. Guidelines for Agricultural Extension Workers. UN/FAO/WES/72-007. 1976. United Nations Development Programme/Food and Agriculture Organization of the United Nations (UNDP/FAO), P.O. Box 1174, Apia, Western Samoa.

Outlines the Village Development Program which seeks to increase productivity and to encourage villager participation in all phases of the development process, and summarizes proposals submitted by villagers in response to a government invitation. Included are proposals for non-agricultural projects — such as improving roads, electrical and water supplies, and buildings — as well as for agricultural projects. Practical reference materials for agricultural extension agents cover plantation improvement, livestock and fencing, beef cattle, fisheries and boats, plantation extension, small-crop development, coconut and pig production. 51 pp. (Also available: Recommendations for Growing Coconut in Western Samoa [1978, 14 pp.] and Recommendations for the Growing of Taro in Western Samoa [1977, 15 pp.].)

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Hurly, Paul. The Lefatshe la Rona Radio Learning Group Campaign of Botswana: A Communication Case Study. 1976. University of Botswana and Swaziland, Private Bag 22, Gaborone, Botswana.

Briefly discusses the radio-learning-group campaign used in Botswana to inform and educate the public about the Government's policy of Tribal Grazing Lands (TGLP). Describes the radio campaign as a cheap, efficient and fast means of reaching the dispersed population of Botswana. 12 pp.

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India. Farmers Exchange Programme: Evaluation Study on Transfer of Technology Through Exchange of Farmers. 1976. Training Unit, Directorate of Extension, Ministry of Agriculture and Irrigation, New Delhi, India.

Evaluation of an exchange program designed to train farmers in improved wheat production technology. Report describes the organization of the program and the evaluation methodology which consisted of participant observation and a survey conducted while the training was in progress. Data analysis indicated that farmers gained professionally from the program and that the exchange program is an effective technique for technology transfer. Contains recommendations and appendices with details of the training program and the evaluation. 27 pp.

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Institut Africain pour le Developpement Economique et Sociale (INADES)-Formation. Farming with Animal Power. Farmer Production Series. Agricultural Apprenticeship Course, Second Year. 197[illegible]. INADES-Formation, 08 B.P. 8, Abidjan 08, Ivory Coast.

A how-to manual for adult farmers and young people about to become farmers. Discusses the advantages of using animal power, the training and care of oxen, donkeys, horses and mules, tools for use with animal power, and income possibilities from using animal power. 44 pp. (Other manuals in the series are Sheep and Goat Breeding [1976, 51 pp.], and The Modern Farm Business [1976, 43 pp.].)

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International Labour Office (ILO). Special Services of Rural Workers' Organisations: A Workers' Education Manual. 1978. ILO, CH-1211, Geneva 22, Switzerland.

Defining a rural worker as "any person engaged in agriculture or a related occupation in a rural area, whether as a wage earner or a self-employed person", this document is a workers' education manual intended to assist rural workers' organizations to extend their services beyond the traditional work-related orientation into economic, educational and social development roles. Through a series of case studies from Asia, Africa, and Latin America, the author systematically illustrates the services various rural workers' organizations (unions) provide their members; the problems, advantages and pitfalls of some special services such as credit, marketing, housing, and health, offered through cooperatives. Principles for planning and operating special services are introduced to help rural workers' organizations identify needs that are not met by traditional services. 89 pp.

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International Union of Nutritional Sciences (IUNS). "Re-Thinking Food and Nutrition Education Under Changing Socio-Economic Conditions." IFDA Dossier. Vol. 25, September/October 1981 International Foundation for Development Alternatives (IFDA), 2 Place du Marche, 1260 Nyon, Switzerland.

Based on the assumption that there is more to malnutrition than ignorance on the part of individuals, this report of a workshop held in Tanzania in 1978 asserts that educators must approach nutrition with a broader perspective. Workshop participants maintain that malnutrition must be fought on a national level by examining and dealing with the distribution or maldistribution of control over food production. Societal level nutritional problems are not universal and therefore must be examined in the context in which the nutrition activities are carried out. Such contexts include traditional dietary practices, food taboos, food science and technology, population, and nutritional priorities in food and agricultural research. Concludes that the socio-economic structure of a country determines the role of its nutrition educators. pp. 31-40.

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Jenkins, Janet and Hilary Perraton. Training Farmers by Correspondence in Cameroon: A Case Study. 1982. International Extension College, 18 Brooklands Avenue, Cambridge CB2 2HN, England, UK.

Explores the correspondence training courses for extension training agents and peasant farmers offered by INADES--Formation, a West African training organization, and considers the effectiveness of the courses in view of their cost. The content of the courses cover improved farming practices and reasons behind them, with the quality of education emphasized over the quantity of enrollment. Concludes by pointing out that there is still a debate about whether the program should be oriented toward extension agents or farmers. Authors note studies which show that while the course is effective in promoting change in farming practices, the cost per student is quite high, although possibly cheaper than conventional means of education. 42 pp. Summary in French.

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Jones, Gwyn E. and Max A. Peberdy. Into Work: A Study of School-Leavers Entering Agriculture. 1979. Agricultural Extension and Rural Development Centre, University of Reading, London Road, Reading RG1 5AQ, England, UK.

A concise and readable report on the findings and recommendations of a 4-year study on the recruitment, training, and retention of young people in agriculture. The research focused on 770 individuals who entered agriculture in 1974 and addressed why young people enter agriculture, the early years of an agriculturalist's career, why some elect additional training, and why some leave the profession. A number of recommendations, many relating to training programs for entrants and the apprenticeship system, are made. Especially valuable for planners of agricultural education at a national level. 20 pp.

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Karim, Rezaul, Amir Hossain and Abul Kashem. Evaluation Report on Inservice Training on Agriculture and Rural Development for the Bank Officers (Agrani Bank and Sonali Bank). 1979. Graduate Training Institute (GTI), Bangladesh Agricultural University, Mymensingh, Bangladesh.

Evaluates two inservice training programs conducted by the GTI which aimed at providing exposure to technical agriculture and rural development for bank agricultural-loan officers. Participants were surveyed for their opinions on the content, structure, and accommodations of the programs along with information on their backgrounds and training needs. The results of the evaluation highlight the need for training programs of this sort. 48 pp.

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Kashem, Abul and Ali Muhammad. Evaluation Report of Inservice Training on Soybean Production and Utilization in Bangladesh for the Thana Extension Officers. 1979. Graduate Training Institute (GTI), Bangladesh Agricultural University, Mymensingh, Bangladesh.

Summarizes participants views regarding the subject matter, usefulness, and organization of 12 days in-service training on Bangladesh soybean production and use. The document may be helpful to organizations or individuals planning similar activities. Included are the agenda for the training program and sample pre- and post-evaluation questionnaires. 40 pp.

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Lindblad, Carl and Laurel Druben. Small Farm Grain Storage. VITA Publication Manual Series, No. 35E. ACTION/Peace Corps Programs and Training Journal Manual Series, No. 2. 1976. Volunteers in Technical Assistance (VITA), 1815 N. Lynn Street, Suite 200, Arlington, Virginia 22209, USA.

This manual contains some useful information for development workers about the nature of grain, the relationship of moisture and air to grain, preparing grain for storage (with a separate section on drying), protecting stored grain from insects and rodents, and various methods of storing the grain. Some of the methods of harvesting, drying, storing, and pest control utilize intermediate technologies and may even utilize locally available materials. The section on solar dryers is particularly helpful in this respect. Illustrations and scripts for presentation of some of the concepts are included, as well as drawings for building the various types of dryers and storage units. The section on pests and pest control would be useful to the fieldworker as information about the nature of the pests, but less useful on pest control since the authors depend heavily upon use of chemical poisons. (Pages not numbered.)

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Loftus, L. and J.W. Cary. Towards an Understanding of Management Education in Agriculture. 1980. School of Agriculture and Forestry, University of Melbourne, Parkville 3052, Australia.

An insightful report consisting of two analytical essays that examine the concept of management in general and farm management education in particular. In the first essay, Loftus focuses on problems and difficulties encountered in definition: farm management is viewed as an integral combination of the physical and monetary resources of a farm and the personal resources of the farmer, the purpose being to acquire more income and other specified objectives. He then speculates why Australian farmers are not always successful, presents theories of and about management, and discusses decision-making theory within the context of farm management. He concludes that, overall, farmers should be exposed to management education so that they might become better managers and increase their productivity. In the second essay, Cary proposes an Agenda for Management Education in Agriculture with particular emphasis on the science of management. He focuses on the typical activities of the manager, of which the most important two are problem-solving or decision-making, and goal achievement processes which invariably involve thought and action. The problem-solving process consists of six elements, namely: definition of the problem, observation, analysis, decision-making, action, and responsibility for decisions. The goal-achievement process is a dynamic one, aimed at setting goals and assessing the best ways of obtaining them. Cary recommends that farmers should be acquainted with both these processes in order to enhance their management capabilities. Also covered in this essay are positive and normative approaches to farm management; the philosophical problems of rationality; and ways of improving management skills within the farmers' learning frameworks. Agricultural project planners, managers, and educators will find this report a useful resource for developing and implementing programs in farm management education. 66 pp.

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Mbunda, Fr. D. "Education Mass Campaigns: Tanzania Experience--'Chakula Ni Uhai.'" Journal of Adult Education: Tanzania. No. 1, August 1977. Institute of Adult Education, P.O. Box 20679, Dar es Salam, Tanzania.

"Chakula Ni Uhai" (Food is Life) was the subject of a mass campaign conducted in 1975 by the Institute of Adult Education in Tanzania. The Coordinating Committee sought to establish an adult education program with "structures which organize, plan, supervise, and evaluate the campaign in an integrated way" to present the issues of food production, preservation, and nutrition to the people. Radio broadcasts, along with study groups led by group advisors trained to encourage group participation, were the focus of the year's activities. The author discusses the socialist educational goals of participation and the success and problems encountered in the campaign. pp. 9-22.

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McCabe, Marie S. and Burton E. Swanson (compilers). International Directory of Extension Organizations and Extension Training Institutions — 1975. 1975. Rural Development Research Project. Midwestern Universities Consortium for International Activities, Inc. (MUCIA), 208 Agricultural Hall, University of Wisconsin, Madison, Wisconsin 53706, USA.

Lists extension organizations and training institutions with an emphasis on programs for small farmers. 174 pp.

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Norman, D.W. Methodology and Problems of Farm Management Investigators: Experiences from Northern Nigeria. African Rural Employment Research Network, Paper No. 8. 1973. Department of Agricultural Economics, 202 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, USA.

The author describes the experiences of the Rural Economy Research Unit (RERU) in carrying out village studies in Nigeria since 1965. The data collected through these village studies are particularly useful for policy analysis of rural employment and rural development at the local, regional, and national levels. It was found that the RERU used the "frequent interviewing approach" in its farm-management studies, mostly because farmers in the northern part of Nigeria are usually illiterate. This method proved appropriate and helped RERU obtain in-depth information on the social and economic factors affecting each farming unit. Norman also discusses some of the problems encountered when collecting the data. These included choice of the survey period; the effect of seasonal variation; data collection by field and plot; poor estimation of time, distance, and area; measuring crop yields; missing data; sensitive data; and data accuracy. Finally, the author outlines the objectives of the rural farm management studies and the methods used to select areas, villages, and farmers. Although published ten years ago, this document remains a particularly important resource for rural development planners and managers. 45 pp.

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Nyhuis, Jane. Desert Harvest: A Guide to Vegetable Gardening in Arid Lands. 1982. Meals for Millions/Freedom from Hunger Foundation, Southwest Program, 209 E. 16th Street, P.O. Box 42622, Tucson, Arizona 85733, USA.

The Neighborhood Gardens Project, sponsored by Meals for Millions (MFM), observed that most desert dwellers lacked information and knowledge of the possibilities in desert food gardening. This booklet is one result of MFM's efforts to focus on educational outreach. Topics covered include soil and bed preparation, composting, plant choice, planting procedures, garden maintenance, harvesting, as well as solutions to such problems as insects, disease, plant nutrition, soil alkalinity, frost, sun and heat, birds, and animals. 63 pp.

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Padlan, Pedro G. Readings on Aquaculture: Improved Techniques of Milkfish Farming in the Iloilo Province, The Philippines. 1982. Raja Prem Kumar, Youth Charitable Organization, 20-14, Urban Bank Street, Yellamanchi - 531 055, India.

Provides general guidelines for using an improved natural source of food imported from Taiwan for feeding of milkfish in brackish-water ponds in the Philippines. Standard operating procedures for preparing and stocking ponds, controlling pests and diseases for both the fish and the fish food-algae, and harvesting are described for a two-crop seasonal cycle.

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Perraton, Hilary. "Agricultural Extension and Mass Media." Media in Education and Development. Vol. 15, No. 4, December 1982. Peter Peregrinus Ltd., Station House, Nightingale Road, Hitchin, Herts. SG5 1RJ, England, UK.

Examines the use of mass media to increase the range and effectiveness of agricultural extension, focusing on two case studies: INADES-Formation in West Africa and the Extension Aids Branch (EAB) in Malawi. As the training branch of a private organization, Institut Africain pour le Developpement Economique et Social (INADES), INADES-Formation aims to reach both farmers and extension agents through correspondence courses, a magazine (Agripromo), and group seminars. Underlying all of its efforts is an emphasis on education rather than only the extension of information. The EAB, a division of Malawi's governmental extension service, uses radio, print, and visual media to reach farmers. It produces regular radio programs, a magazine (za Ahikumbi), posters, and pamphlets, and operates 17 cinema vans which carry puppet plays and films to rural areas of the country. An Evaluation and Action Research (EAR) unit carries out formative evaluations on all of the EAB's activities. The author concludes that the methods used by both organizations are cost effective and provide a valuable means of support for agricultural extension services. In addition, radio is advocated as a strikingly effective way of reaching farmers. pp. 159-162.

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Perraton, Hilary, Dean Jamison, and Francois Orivel. Mass Media for Agricultural Extension in Malawi: A Case Study. 1982. International Extension College, 18 Brooklands Avenue, Cambridge CB2 2HN, England, UK.

Describes the various methods of providing educational information for farmers in Malawi, including face-to-face contact between farmers and extension agents, radio, print, materials, and mobile vans carrying films and puppet shows. While more people are aware of extension agents as sources of agricultural information, cost effectiveness analyses indicate that this type of contact is the most expensive means by which to reach farmers. Studies show that radio is the least expensive media, followed by the mobile vans, with training centers and agricultural agents being the most costly. However, the question remains as to whether the various types of media are equally effective in changing farming practices. Educated farmers seem to have the most contact with extension agents and therefore, modify their farming practices more readily resulting in higher yields. The authors conclude that a combination of methods are necessary to reach as many farmers as possible in the most cost effective manner. 51 pp. Summary in French.

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Philippines, Bureau of Agricultural Extension, Department of Agriculture. Rural Youth Evaluation Programmes: Study of Rural Youth Programmes in the Philippines. Rural Youth Study No. 1. FAO/SWE/TF. 1976. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Reports on a study of the effectiveness of non-formal youth programs in reaching out-of-school youths from low-income families in the Philippines. Discusses programs offered and problems surrounding the participation of out-of-school youths in these programs. Lack of awareness of the benefits of participating in programs, and shyness on the part of the youths are cited as problems to overcome. Recommendations include developing programs which focus on economic issues and emphasize vocational skills, while not neglecting social, moral, physical, and personality development. Also recommends introducing income-generating activities in programs as a means of providing the necessary funds for youths to continue their formal education. 48 pp.

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Pillai, K. Sivadasan. Non-Formal Education for Agricultural Workers and Fishermen: A Case Study. 1978. Department of Education, University of Kerala, Trivandrum-695014, India.

The lack of notable success in an initial pilot project for implementing literacy centers for agricultural laborers and fishermen in existing libraries in the state of Kerala led to the development of two literacy primers and a systematic teaching method for testing in a subsequent pilot project for the same program. This case study describes the structure, obstacles, and results of this second pilot project which integrated literacy teaching into a holistic rural development perspective. 43 pp.

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Quayle, D.B. Ostras Tropicales Cultivo y Metodos. 1981. Centro Internacional de Investigaciones para el Desarrollo (CIID), Oficina Regional para America Latina y el Caribe, Apartado Aereo 53016, Bogota, Colombia; or International Development Research Centre (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

Interest in oyster farming in tropical regions is increasing due to its potential as both a protein source and as a source for artisan employment. A practical guide to the biology and simple technology on oyster farming, this manual has been produced to help fill the gaps of knowledge on various cultivation techniques. 84 pp.

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Rich, Thomas A., Edgar G. Nesman, Richard J. Anderson, Sara G. Rivers, and Dennis J. Archambeau. Cross-Cultural Comparison of Project Impact: A General Summary. Basic Village Education Guatemala Evaluation Reports. Evaluation Summary No. 3. 1978. Human Resources Institute, College of Social and Behavioral Sciences, University of South Florida, Tampa, Florida 33620, USA.

A brief summary of major findings of the experimental Basic Village Education Project, which tested the effectiveness of selected combinations of communication techniques in delivering agricultural information to subsistence farmers. 21 pp.

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Roskelley, R.W. with Roger S. Banas et al. The Farmer Scholar Program. Vols. 1, 2 and 3. 1975. International Institute of Rural Reconstruction (IIRR), Silang, Cavite, 2720 Philippines.

Discusses planning and implementation of the Farmer Scholar Program at local, agency, and provincial levels, and evaluation of program outcomes. Using a multiplier process, the program sought to develop a practical, economical and replicable system of spreading agricultural technology to small-scale farmers in 39 villages in Silang, Cavite, Philippines. Presents lesson plans for courses on rice, swine, poultry, and vegetable production, and on banking, water management, and the formation of Barrio Livelihood Committees. Stresses teaching via demonstration, learning by doing, the use of visual aids, group discussion, and similar methods that call for active learner involvement. Vol. 1: 552 pp.; Vol. 2: 201 pp.; Vol 3: 571 pp.

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Roskelley, R.W. "Some Human Relations and Training Principles Taught and Applied in the Development and Implementation of the Farmer Scholar Program." 1978. Available from Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

The author provides a brief ex post evaluation of a Farmer Scholar program in the Philippines along with some insights and observations about the origin and implementation of the program. 11 pp.

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Salmon, Peter, W. A Psychological Investigation of Farm Management Education: A Personal Construct Theory Approach to Agricultural Extension. 1980. Agricultural Extension Research Unit, School of Agriculture and Forestry, University of Melbourne, Parkville 3052, Australia.

Recent changes in the agricultural industry have resulted in a trend toward the economic and technological restructuring of agriculture throughout the world. This document reports on a five year psychological study of Australian farmer attitudes and perceptions toward their world and the changes confronting them. The discussion illustrates the development and use of a dynamic testing procedure that enables the measuring and assessing of processes of change (in behavior and world view) that accompanies cognitive reconstruction or learning. 139 pp.

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Salomon, Rosalba. Family Gardens in Rural Zones. n.d. Christian Children's Fund, Inc., Apartado Postal 13-576, Mexico 13, D.F. Mexico.

Describes classes taught at Christian Children's Fund on how to raise edible greens with the purpose of improving nutrition. Using these classes, nummerous projects and institutions have successfully encouraged people to plan family vegetable gardens. 2 pp.

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Seltzer, Miriam (ed.). Home Economics and Agriculture in Third World Countries. 1980. Center for Youth Development and Research, College of Home Economics, University of Minnesota, 48 McNeal Hall, 1985 Buford Avenue, St. Paul, Minnesota 55108, USA.

Papers presented at a seminar aiming to strengthen cooperation between the colleges of agriculture and home economics and open avenues of collaboration in teaching, research, and development projects. A central theme of the seminar was the "new home economics", which considers the household as an economic unit of production and consumption functioning according to a principle of maximum utility. From this perspective, "full income" consists not only of monetary gains, but also of home resources (time and labor, for example) and goods. Women, who form the most apparent link between the new home economics and agricultural production, are the focus of several papers which consider their roles as agricultural producers, consumers, distributors, and decision makers in the management of household economic affairs. Other papers deal with new directions in teaching, research, and development projects. 103 pp.

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Shaner, W.W., P.F. Philipp, and W.R. Schmehl. Farming Systems Research and Development: Guidelines for Developing Countries. 1982. Westview Press, Inc., 5500 Central Avenue, Boulder, Colorado 80301, USA.

A comprehensive set of conceptual and practical guidelines for planning and conducting farming systems research (FSR). Intended as a reference for anyone working in agricultural research and development in order to meet the needs of small-scale farmers in developing countries, this work synthesizes the experiences of governments and research centers working with an FSR approach. Specific emphasis is put on procedures that have proven successful in practice. The relevance of FSR for conditions in developing countries and suggestions for training personnel at all levels of the research and development process are also discussed. The extensive appendix includes detailed descriptions of applications of FSR and variations in the general approach described in the text. 414 pp.

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Shute, J.C.M. (ed.). Ghana-Guelph Extension Studies. 1980. School of Agricultural Economics and Extension Education, Ontario Agricultural College, University of Guelph, Guelph, Ontario N1G 2W1, Canada.

A collection of papers on rural extension in Ghana, based on the Ghana-Guelph Project, a formal collaboration effort between the University of Ghana and the University of Guelph during 1970-1979. Separate articles deal, among other things, with the history of agricultural training and extension in Ghana, in-service extension training, and an evaluation of the home science program in Ghana. Concludes that optimal human resource development in rural Ghana requires the training of effective agricultural and rural development administrators and extension workers. 59 pp. (Also available by J.C.M. Shute is The Ghana-Guelph Project: A Story of International Cooperation, Final Project Report, 1979, 61 pp.)

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Smith, Marny. Gardening with a Conscience: The Organic-Intensive Method. 1981. The Seabury Press, Inc., 815 Second Avenue, New York, New York 10017, USA.

A step-by-step guide to the process of planning an organic garden and techniques for garden maintenance. In Part One the author focuses on creating a garden: gathering information, selecting a garden site, soil testing, compost building, planning what to grow. In Part Two garden maintenance is considered, along with crop rotation, organic insect control, maximizing production, and extending the growing season. 86 pp.

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Smith, Mary. Growing Your Own Food. 1980. Save the Children, 54 Wilton Road, Westport, Connecticut 06880, USA.

A guide to the use of a demonstration garden project to promote balanced nutrition and examine its effect on health. Step by step procedures are presented in methods of organic/intensive gardening utilizing existing soils and waste materials. Sections discuss planning, site preparation, insect control, composting, and harvesting. 35 pp.

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Sutherland, Alan. "A New Way of Teaching School Agriculture to the Children of the Rural Poor in the Islands of the South Pacific." Innotech Journal. Vol. 6, No. 1, January-June 1982. Southeast Asian Ministers of Education Organization (SEAMEO), Regional Center for Educational Innovation and Technology, University of the Philippines, Diliman, Quezon City, Metro Manila.

Between 1973 and 1976, Modern Studies Courses were introduced into the Fijian school curriculum for 3rd and 4th form students to help them interpret "a wide range of aspects of life in modern Fiji." Each course concentrates on one form of agricultural production in order to provide students with enough knowledge and practical experience to allow them to begin commercial production on finishing their fourth form. Practical production experience is felt to be especially important in the formation of attitudes as well as skills. Also important is teaching the principles that underlie farming techniques so that students can adapt their knowledge to changes in technology. In addition, there is an emphasis on learning modern commercial production in order to help train the students to work effectively towards profitability through both modern and traditional methods. The Modern Studies projects also help meet deficiencies in teacher training by providing thorough, well-organized materials which non-agriculturally oriented teachers can learn from and then use to teach the subject. The author provides guidelines for establishing and administering a project-oriented delivery system of agriculture education in the formal school setting. He also discusses the potential of adapting the formal system of delivery to the non-formal situation. pp. 27-36.

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Swanson, Burton E. and Jaffer Rassi. International Directory of National Extension Systems. 1981. International Extension Directory, Bureau of Educational Research, University of Illinois at Urbana-Champaign, 1310 South Sixth Street, Champaign, Illinois 61820, USA.

A revised and updated edition of the original publication issued in 1975. The objectives of the directory are to facilitate exchange between national extension programs and to explore changes that have taken place in participating organizations over the past five years. In the 1981 edition, the scope has been broadened beyond agricultural extension to include such areas as rural youth, home economics, nutrition, and family planning programs. 278 pp. (Single copies of the directory are available free of charge to LDC extension organizations and institutions of higher education.)

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Swanson, Burton E. with Maxwell Nkajimye, Vickie Sigman, Jaffar Rassi, and Timothy Koehnen. International Directory of Agricultural Education Institutions Volume I: Africa. 1981. International Agricultural Education Directory, 357 Education Building, University of Illinois at Urbana-Champaign, 1310 South Sixth Street, Champaign, Illinois 61820, USA.

A directory identifying intermediate level educational institutions, that is, those schools which offer programs of less than 4 years and prepare students for positions in agriculture, veterinary medicine, fisheries, forestry, and home economics. The Directory is arranged alphabetically according to country, giving a brief description of each nation's educational system, as well as a listing of its known intermediate educational institutions. 210 pp.

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Tachie-Menson, C.K.B. Make Your Own Bamboo Chicken House. The "Good Idea" Series No. 3. German Adult Education Association, African Bureau, P.O. Box 9298, Accra, Ghana.

Through photographs, drawings, and written instructions, this booklet describes how to make a chicken house from nails and bamboo poles, using only such tools as a hammer and a handsaw. 16 pp.

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United Nations Industrial Development Organization (UNIDO). Information Sources on the Agricultural Implements and Machinery Industry. UNIDO Guides to Information Sources, No. 8 (Revised Edition). 1982. United Nations, Sales Section, New York, New York 10017, USA.

One in a series of guides published by UNIDO, this document is designed to provide access to information relating to agricultural implements and the machinery industry. The guide contains names and addresses of trade and research organizations, as well as listing print resources such as directories and bibliographies. Sources of statistical and economic data relating to agriculture are also presented. 107 pp. (Also available from the same organization: Information Sources on Grain Processing and Storage. UNIDO Guides to Information Sources, No. 40. 1982; and Information Sources on the Pesticide Industry. UNIDO Guides to Information Sources, No. 10 [Revised Edition]. 1982.)

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Vickery, Deborah and James Vickery. Intensive Vegetable Gardening for Profit and Self-Sufficiency. Program and Training Journal, Reprint Series No. 25. March 1978. ACTION/Peace Corps, Washington, D.C. 20525, USA.

Describes in detail how to garden vegetables intensively in raised beds. With an adequate and controllable water supply the farmer can produce four times as many vegetables per acre as with conventional or mechanized row agriculture. The authors provide a thorough but non-technical discussion of the basics of soil composition and how to build and maintain fertility. They also detail the steps in planning a garden, including labor requirements, financial costs, nutritional yields, market value of crops, and succession planting to maximize yield. Other facets of gardening are also discussed, from preparation of the beds, to planting, cultivating, and controlling water quantity and timing. Supplementary tables provide information on seeds per ounce, germination rate, spacing of plants for intensive growing, compatible combinations for growing within a single bed, warm and cool season crops and estimated yields. 159 pp.

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van Dooren, Pierre J. Co-operatives for Developing Countries: Objectives, Policies and Practices. Plunkett Development Series 4. 1982. The Plunkett Foundation for Co-operative Studies, 31 St. Giles, Oxford OX1 3LF, England, UK.

This book was written in response to a request by a number of university Institutes in the Netherlands for a text to accompany courses on agricultural cooperatives in developing countries. After describing the development of cooperatives in Western Europe, the author discusses how conditions differ for the emergence of cooperatives in developing countries. Some of the issues associated with cooperatives are discussed including the questions of voluntary of compulsory membership and multi-purpose or single purpose functions. Since credit availability for small farmers has been recognized as important for agricultural development in developing countries, the author devotes an entire chapter to a discussion of credit cooperatives. 251 pp.

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Woods, Bernard. "The Handling of Training and Manpower Development in Bank Agricultural Projects." Proceedings of the Agricultural Sector Symposia. 1980. The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, USA.

Training is aimed at changing behavior and improving skill and performance in particular jobs or occupations. Claiming that past efforts at training often failed to achieve expectations, the author discusses how farmer training, in-house training for rural development agency staff, and pre-employment training for the agricultural sector can be upgraded. For pre-employment training he recommends improving communication between employers and pre-service training institutions, and linking formal education and training institutions with the world of work. pp. 371-381.

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Yopo, Boris. "Agricultural Graduates in Latin America: How They and Their Training Must Change." Ideas and Action. No. 15, 1977/2. Freedom from Hunger Campaign/Action for Development (FFHC/AD), Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy. Available in French, Spanish or English.

Analyzes rural alienation of agricultural graduates in Latin America. Claims that current university training tends to produce agricultural "specialists" with little contribution to make in resolving agricultural problems. Noting that elitist attitudes may be related to training which stresses passive learning and neglects the social implications of technical innovations, the author suggests an alternative approach to agricultural training. pp. 10-13.

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3.0 RESEARCH AND PROJECTS IN AGRICULTURE

Adams, Dale W. Small Farmer Credit Programs and Interest Rate Policies in Low-Income Countries. Economics and Sociology Occasional Paper No. 496. 1978. Agricultural Finance Program, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 2120 Fyffe Rd., Columbus, Ohio 43210, USA.

Argues that the poor performance of rural financial markets in low-income countries is partly a function of policies which fix interest rates on agricultural credit at relatively low levels. Based on assumptions that low interest rates will induce farmers to use rural credit, will compensate farmers for production disincentives from other policies, will direct movement toward more equitable distribution of income, and will counter high interest lending behavior of informal lenders, cheap credit has had a negative impact on income distribution and efficiency of resource allocation. 21 pp.

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Adeyokunnu, Tomilayo O. Women and Agriculture in Nigeria. 1981. African Training and Research Centre for Women (ATRCW), United Nations Economic Commission for Africa (UNECA), P.O. Box 3001, Addis Ababa, Ethiopia.

Summarizes data collected and analysized on the involvement of Nigerian women in agriculture, primarily in the areas of farm, processing, and trade. The document is divided into four sections dealing with general information, a review of literature on the subject, empirical findings, and conclusions and policy recommendations. The main conclusion of the study showed that Nigerian women are involved in all aspects of agriculture and rural activities. The type of activities women perform vary on the basis of ethnic background and economic necessity. 43 pp.

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Akerele, Olubanke. Women and the Fishing Industry in Liberia. 1979. United Nations Economic Commission for Africa (UNECA), P.O. Box 3001, Addis Ababa, Ethiopia.

Examines the role women play in development and what happens to them as they engage in the process by looking at the participation of women in Liberia's fishing industry. Akerele concludes that the benefits to women are not proportional to the labor they provide. She also identifies the important role Liberian "Fishmammies" play in linking the formal and informal sectors in urban areas, providing important data on how change can affect women. 82 pp.

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"An Agricultural Cooperative in Guinea-Bissau." Ideas and Action. No. 130. 1979/4. Freedom from Hunger Campaign/Action for Development (FFHC/AD), Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Describes a successful experiment that shows that peasants have the ability to organize and administer their own farm cooperatives. Attributes the success to starting at the level of learning and skills of the peasants and building on existing social structures. pp. 14-24. (Ideas and Action is also available in French and Spanish.)

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Ancheta, Rufina R. The Filipino Women in Rice Farming. Occasional Paper No. 4. 1982. NFE/WID Exchange-Asia, University of the Philippines at Los Banos, College, Laguna, Philippines.

This paper begins with a discussion of the rural Filipino farm family, highlighting the roles of women and their participation in decision-making with regard to the family, the farm, and the community. Focusing specifically on Filipino women's involvement in rice farming, the author outlines and briefly describes the range of tasks performed by women and notes that such farming responsibilities increase an already extensive time commitment required by women's housekeeping and child rearing obligations. While the labor input of young girls often helps to offset the workload of their mothers, this is usually at the expense of their education. Because training in modern agricultural methods and the introduction of various new technologies are directed to the men, women have little opportunity to increase their skills and lighten their workload. The author suggests that more development assistance be given to projects that can initiate "work simplification methods" for women, and recommends modern agricultural training and functional education programs be developed that will enable women to efficiently combine household work and farming. 15 pp.

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Asian NGO Coalition for Agrarian Reform and Rural Development. The Case for Alternative Development of the People, for the People, by the People. 1979. Asian Cultural Forum on Development (ACFOD), Room 201 Siri Residence, 399/1 Soi Siri, Silom Road, Bangkok, Thailand.

Preceeding the World Conference on Agrarian Reform and Rural Development, an intensive campaign was conducted in selected villages and among national and regional non-government organizations (NGOs) in seven Asian countries to ensure the participation of the rural population in the development process. This documentation kit includes the report of a regional NGO Workshop, held February 1979 in Bangkok, and summaries and county reports from Bangladesh, India, Indonesia, Malaysia, Philippines, Sri Lanka, and Thailand. Also contains brochures on issues like small fishermen, bonded labor, peasant theology, peasant organization, and the role of NGOs. Finally a special paper presents the thoughts, experiences, and criticisms of the rural people obtained in interviews and group consultations during the campaign.

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Axinn, Nancy W. Female Emancipation Versus Female Welfare. 1979. Available from Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

Discusses the concepts of emancipation and welfare as they may be interpreted for women in subsistence-level, rural societies in developing countries. The author specifically focuses on the ecology of the family unit from a holistic viewpoint which stresses human-environment interdependence. When developing technological assistance programs, particularly in the agricultural sector, she advocates that more attention be given to how those programs benefit the total ecosystem in a given cultural context. Axinn is critical of the "what worked for us will work for you" assumption which often guides efforts to transfer western technology to traditional societies. 5 pp.

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Bagchi, Deipica. Female Roles in Agricultural Modernization: An Indian Case Study. Working Paper No. 10. 1982. Office of Women in International Development (WID), 202 International Center, Michigan State University, East Lansing, Michigan 48824, USA.

The author presents comparative data from a study exploring patterns of female participation in the rural economies within varying cultural frameworks in three different crop regions in Madhya Pradesh, India. Results of the study indicate that although women are direct participants and decision-makers in agricultural production, the introduction of modern technologies and mechanization is gradually eliminating their role. The author contends that in order to offset the increasing displacement of women in the rural sector, and to integrate them more fully into the current development process, attention must be given to the positive relationship that exists between "a women's role as an active family laborer and her role as a decision-maker in the adoption of modern technology." 39 pp.

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Bardsley, J.B. Farmer's Assessment of Information and Its Sources: An Investigation Using Interactive Computer Techniques. 1982. School of Agriculture and Forestry, The University of Melbourne, Parkville 3052, Australia.

Based on implicit and explicit models of human action found in adult education, the author devised a model for the operation of the Australian agricultural extension services. The model was tested through techniques which enable the views of wheat farmers and farm advisors to be compared through an interactive computer program. Also investigated was the farmers' assessment of the usefulness of information sources. The study revealed that "practical approach, good local knowledge, and strong technical knowledge were among the most important attributes sought by farmers." From this information the author concludes that the most appropriate role for agricultural extension in Australia is in support for farmer self-education rather than in change advocacy. 191 pp.

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Barr, N.F., R.E. Weston, and J.W. Cary. Farmers Looking to the Future: Labor Mobility and Adjustment Strategies in 1970's. 1980. School of Agriculture and Forestry, University of Melbourne, Parkville 3052, Australia.

Reports on the adjustment strategies and plans for the future that Australian dairy farmers adopted during and after the ardous economic conditions that faced them in the seventies. The aim is to show the strategies farmers can use to adjust to serious economic hardships. The first part of the paper deals with the general socio-economic matrix within which the adjustment strategies were developed, presents a case study of the plans, decisions and actions the dairy farmers took, and discusses the changing state of the dairy industry and predictions concerning the future. The remainder of the report deals with the sampling and interviewing of two groups of farmers regarding the type of strategies and planning they adopted in 1976 and 1978 respectively. The findings from the survey are analyzed, and some implications are drawn from them for government policymakers in agriculture. 81 pp.

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Baviskar, B.S., and Abdul Halim, S. Joseph, L. Vilakati, M.B. Mgina. Rural Decline in the United Kingdom: A Third World View. 1980. The Arkleton Trust, Langholm, Dumfriesshire DG13 OHL, Scotland, UK.

This study reports the observations of a team of Third World agricultural experts during a three week study tour of rural development programs in the United Kingdom. This turn about of roles provided the British with a critical appraisal of three programs in several counties. The Third World team recommended that the UK develop a national strategy of rural development which stresses a better understanding on the local level of broad ranging development issues, a greater emphasis on training, and a centralized Rural Development Agency to serve as a catalyst for these changes. Also contains comments from local community development workers who felt additional commentary on the situation was necessary due to the short study time allowed the group of visiting scholars. 27 pp.

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Bayley, J. Elise and C.E. McKone, (eds.). Year Book of Agricultural Cooperation 1981. 1982. The Plunkett Foundation for Co-operative Studies, 31 St. Giles, Oxford OX1 3LF, England, UK.

An annual publication which reviews developments in agricultural cooperatives throughout the world. The 1981 edition includes several articles on cooperative ventures in livestock and meat production in Europe and Africa. Also of interest are review articles of cooperatives in Zimbabwe, Algeria, Sri Lanka and Malaysia. In the editorial, McKone points out that cooperatives can play an important role in increasing production in developing countries. He also notes that cooperatives in industrialized as well as developing countries can be instrumental in promoting the use of new and renewable energy sources. 286 pp.

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Bettles, F.M. Women's Access to Agricultural Extension Services in Botswana. 1980. Women's Extension Unit, Department of Agricultural Field Services, Ministry of Agriculture, Private Bag 003, Gaborone, Botswana.

Analyzes women's extension work in Botswana as it relates to the general role of women in African agriculture. An overview of agriculture in Botswana, historical development of the women's extension program, and the future of women in Botswana's agriculture are discussed. The author concludes that the subsistence agricultural sector, largely a female province, has been too long ignored by economists and planners who have neither recognized nor quantified the crucial contributions of women in agriculture. 25 pp.

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Bittenbender, H.C. Tropical Vegetables Bibliography. 1983. H.C. Bittenbender, International Agriculture, Michigan State University, 201 Horticulture Hall, East Lansing, Michigan 48824, USA.

This bibliography contains topical listings of sources dealing with tropical vegetables. Topics include: human nutrition and vegetables; vegetable production, home gardens, and vegetables in specific regions; and soils, weeds, and vegetables. 7 pp.

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Botswana. Report on the Involvement of Women in the Integrated Farming Pilot Project. 1976. Ministry of Agriculture, Department of Field Services, Private Bag 003, Gaborone, Botswana.

Describes the Integrated Farming Pilot Project which directs extension activities toward farm families rather than just individual male farmers. Women are integrated into the agricultural section of the project through women's groups established for this purpose. Discusses activities of each women's group and some of the problems they have faced. 10 pp.

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Burton, Michael, Douglas R. White, and Malcolm M. Dow. Sexual Division of Labor in Old World Agriculture. Working Paper No. 5. 1982. The Office of Women in International Development (WID), 202 International Center, Michigan State University, East Lansing, Michigan 48824, USA.

An analysis of the "network autocorrelation model", which uses a multiple regression framework to determine the causes of cross-cultural variation in women's contribution to agricultural subsistence. Among the ten variables used in the analysis, four were found to be significant in accounting for variation in both male and female contributions: importance of domesticated animals, length of dry season, presence of the plow, and population pressure. 18 pp.

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Calkins, Peter H. and Kuang-Rong Huang. Soybean Production in Taiwan: A Farm Survey. Technical Bulletin #11 (78-89). 1978. Office of Information Services, Asian Vegetable Research and Development Center (AVRDC), P.O. Box 42, Shanhua, Tainan 741, Taiwan, Republic of China.

As one of the richest sources of plant protein, along with being one of the most versatile foodstuffs, the soybean is frequently cited as having an immense potential for alleviating malnutrition and improving farmer income. This document reports on a study by AVRDC designed to measure changes in soybean profitability over a three-year period (1974-1977), to determine why farmers in Taiwan did or did not grow soybeans, and to assess the major problems still limiting its planted area. Among their findings, the authors note that the cultivars preferred by farmers differed seasonally and changed over time due to yield and price trends. They also state that profitability was never a major criterion sought by farmers, rather, farmers preferred cultivars with a short duration to fit into intensive land-use systems: "Because cultivars improved through crossing often lacked short duration, they were not acceptable to farmers." 28 pp.

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Campbell, David J. and David J. Trechter. "Strategies for Coping with Food Consumption Shortage in the Mandara Mountains Region of North Cameroon." 1982. Available from Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

The authors hypothesize that rural populations demonstrate a heirarchy of behavioral responses to food shortages and that community-level monitoring of such behavior might provide a leading indicator for an impending food shortage. Survey data from the Northern Cameroon are used to test the hypothesis. 11 pp.

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Castillo, Gelia T. "The Changing Role of Women in Rural Societies: A Summary of Trends and Issues." RTN Seminar Reports. No. 12, February 1977. The Agricultural Development Council, Inc., 1290 Avenue of the Americas, New York, New York 10019, USA.

Based on research from 23 countries, this report of an August 1976 seminar presents a number of general conclusions about women in rural societies. Examines trends such as the "feminization" of agriculture, the omission of female contributions in labor statistics, and changing employment opportunities for women. Also discusses issues related to the lack of training opportunities for rural women, the effects of development on women's status, and women's participation in the economy and in decision making. 11 pp.

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Cebotarev, E.A. and Frances M. Shaver (eds.). Women in Agriculture and Rural Societies: Resources for Feminist Research/Documentation sur la Recherche Feministe (RFR/DRF). Volume 2, No. 1, March 1982. RFR/DRF, Department of Sociology, Ontario Institute for Studies in Education, 252 Bloor Street West, Toronto, Ontario M5S 1V6, Canada.

This special journal issue provides a wealth of information on resources for studying and building awareness to the situation of women on the family farm in industrial nations and in rural society, in general, in developing nations. Short essays dispel the notion that life is easy on the small family farms of North America while other papers explore the impact of technological change, agrarian reform, and socialist development strategies on women in developing countries. This issue also includes brief discussions on aspects and examples of development work conducted for women by women, and descriptions of completed and on-going research. An extensive annotated bibliography is also provided. Papers in English or French. 198 pp.

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Centro Internacional de Investigaciones para el Desarrollo (CIIDE). Una Decade de Aprendizaje: Los Primeros Diez Anos de la Division de Ciencias Agricolas, Alimentos y Nutricion. 1982. CIID, Oficina Regional para America Latina y el Caribe, Apartado Aereo 53016, Bogota, Colombia; or International Development Research Centre (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

A report of the Division of Agricultural Sciences, Food and Nutrition of the IDRC synthesizing 10 years of research and project experience world wide in such areas as food crops, post-harvest systems of food preservation and storage, silviculture, animal health and nutrition, and fisheries. Among the topics discussed in a chapter on lessons learned are the philosophy and method of work, project planning, technical assistance and evaluation, and the relation between the projects and the beneficiaries. In Spanish. (Also available in English and French.) 192 pp.

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Cernea, Michael. Macrosocial Change, Feminization of Agriculture, and Peasant Women's Threefold Economic Role. World Bank Reprint Series No. 98. n.d. World Bank, 1818 H Street, N.W., Washington, D.C. 20433, USA.

In view of the structural changes in the last 25 years within Romanian agriculture, this paper challenges the widely accepted idea that agriculture is typically a male occupation. As a result of collective agriculture, increased industrialization, and heavy rural-urban migration, the majority of Romanian women have assumed the agricultural responsibilities. Thus, Cernea contends, the economic role and the status of women has improved. pp. 108-124.

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Chikamba, C.Y. Food and Nutrition Policy Formulation: The Case of Luapula Province. n.d. National Food and Nutrition Commission of Zambia, P.O. Box 2669, Lusaka, Zambia.

Describes efforts to investigate the status of food supply and recommends policies which relate to improvement of food production, marketing, transportation, distribution and other important variables in the Luapula Province of Zambia. 50 pp.

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Choe Yang-Boo. The Korean Model of Rural Saemaul Undong: Its Structure, Strategy and Performance. Working Paper No. 4. 1978. Rural Development Research Department, Korea Rural Economics Institute, Seoul National University, Gwanag-Gu, Seoul 151, Korea.

Assesses the social and economic conditions of Korea and the problems of its rural sector which resulted in the emergence of the Rural Saemaul Undong (RSU) or Rural New Community Movement in 1971. Reviews the goals, strategic principles, and philosophy of this project to strengthen Korea's agricultural work-ethic. Also discusses major policy instruments and reviews the project and the results from the past seven years. 70 pp. (Also available from Seoul National University is Participation in Saemaul Movement (n.d., 18 pp.) by Man-Gap Lee which outlines rural participation prior to and following the initiation of Rural Saemaul Undong.)

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Colfer, Carol J. Pierce. "Farming Systems and Women." BIFAD Briefs. Vol. 6, No. 8, September-October, 1981. BIFAD Briefs, Room 2246 NS, Washington, D.C. 20523, USA.

Reviews the conceptual advantages of farming systems, referring to "the trend to move agricultural research and development from the experiment station out to the farm", and how such systems can be used to solve some problems concerning women's participation in development. Colfer stresses that through farming systems women and scientists can both benefit from mutual cooperation and exchange of ideas, thus leading to a more active role for women in development. pp. 1-3.

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Colfer, Carol J. Pierce. "Home Gardens...Not So Easy." Agenda. October 1981. Press and Publications Division, Office of Public Affairs, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Examines reasons why government and internationally financed programs designed to encourage home gardening have not been successful in Long Segar, Indonesia. The exclusion of women from training programs; the multitude of production problems, such as lack of fertilizer and pesticides; and the inability of farmers to find a ready market for their vegetable crops, are identified by the author as contributing factors in the failure of home gardens. pp. 8-11.

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Collins, Joseph, with Frances Moore Lappe and Nick Allen. What Difference Could a Revolution Make? Food and Farming in the New Nicaragua. 1982. Institute for Food and Development Policy, 1885 Mission Street, San Francisco, California 94103, USA.

Based on the premise that "hunger can only be eliminated through political and economic changes that redistribute power over food-producing resources", this report explores the changes which have occurred in Nicaragua's land distribution, and thus food availability, since the 1979 revolution. While strongly praising the new government for its progress in developing equitable agrarian and food distribution policies, the authors also provide a detailed review of these policies, the rationale behind them, and the resistance they have received both externally and internally. 184 pp.

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Community Development Trust Fund of Tanzania. Appropriate Technology for Grain Storage in Tanzanian Villages. 1977. Economic Development Bureau, Inc., 234 Colony Road, New Haven, Connecticut 06511, USA.

A report of a pilot project in Tanzania for improving small-scale grain storage at the village level. Along with outlining the participatory "village dialogue" approach used by the project team, the report also highlights some of the perceived problems surrounding food supply and storage that emerged from the village discussion meetings, as well as suggested modifications for existing storage systems, the implementation of storage improvements, and recommendations for replicating the project in other regions of the nation. 94 pp.

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Conneely, Dudley. "CAIM: Shared Struggle, Shared Rewards." Dialogue. Winter/Spring, 1979/80. International Voluntary Services, Inc. (IVS), 1717 Massachusetts Avenue, N.W., Suite 605, Washington, D.C. 20036, USA.

Describes the Cooperativa Agricola Integral Mineros (CAIM), an organization of cooperatives founded and controlled by small-scale rice farmers in the jungle lowlands of south-eastern Bolivia. The project is committed to local participation and control and monitors its growth rate so cooperators will retain that control. In English, French and Spanish. pp. 23-26. (Also of interest is "Justice, Dependence and Profits" by Charlie Hale [pp. 26-30], which discusses CAIM's future and some of the difficult choices the organization is facing as it attempts to reconcile the problems of economic reality with the principles of social justice. Examples of alternatives include increasing mechanization which, though it may increase profits and thus decrease dependence on outside funding, may also place CAIM members in a position where they can exploit other farmers.)

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Copur, Halil. Local Organization Dimensions of Rural Development in Turkey: Socio-Economic Stratification Orientations Toward Participation, and Attitudinal Modernity. Special Series on Rural Local Organization No. 5. 1980. Rural Development Committee, Center for International Studies, 170 Uris Hall, Cornell University, Ithaca, New York 14853, USA.

Recognizing the importance of agriculture for rural development, and using Turkey as a case study, the author examines agrarian rural organization in relation to participation and development. The author used villages as the basic unit of analysis to identify structural characteristics that encourage and impede the development process. The author argues that "sharp stratification of socio-economic organization severely limits development" and that involvement in local organizations promotes development. It is suggested that active and egalitarian participation of the masses in accessing and using the entire resource base is the key to development. 71 pp.

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Crawford, Paul R. and A.H. Barclay, Jr. AID Experience in Agricultural Research: A Review of Project Evaluations. Program Evaluation Discussion Paper No. 13. 1972. Office of Evaluation, Bureau for Program and Policy Coordination, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Intended to stimulate discussion on the role of research in agricultural development, this report identifies trends, problems, and issues in light of AID's efforts in conducting and facilitating agricultural research. An analysis of 131 evaluations of a sample of 48 research projects provided information on patterns of success, failure, implementation problems, and issues. The authors stress that their results, especially in identifying reasons for project success or failure, were not as extensive as anticipated because most of the project evaluations focused more on operational problems rather than on project impact. Brief project descriptions, survey data, and analyses are provided in the annexes. 257 pp.

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Cummings, Ralph W., Jr. Minimum Information Systems for Agricultural Development in Low-Income Countries. A/D/C Seminar Report No. 14. 1977. Agricultural Development Council, Inc.,(A/D/C), 1290 Avenue of the Americas, New York, New York 10019, USA.

Defines the information system as a process based on continuous communication between users and suppliers through which information is gathered, organized, and applied to policy and decision making. Addressing issues related to agricultural information, this report describes types of users and suppliers, and discusses common methods of data collection such as censuses, surveys, and field reporting. Stresses the importance of accuracy for low-income countries where errors may result in serious food shortages. In order to obtain more accurate information about farmers' needs and capabilities, warns against overuse of sophisticated econometric models and advises more qualitative methods of data collection. Concludes with four essential elements of an information system, underlining the importance of flexibility, continual reassessment of methods and priorities, and two-way communication flow. 13 pp.

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Davidson, John R. The Rural Credit and Cooperative Development Project in Guatemala. Case Studies in Development Assistance No. 1. 1977. Agricultural Cooperative Development International, Suite 1200, 1430 K Street, N.W., Washington, D.C. 20005, USA.

Describes the origin and achievements of the Rural Credit and Cooperative Development Project in Guatemala. The project seeks to increase the production of basic grains and food crops to raise the income of small farmers, and to generally improve the quality of life in the countryside so as to discourage migration from rural to urban areas. The project has also established a federation of regional cooperatives. 49 pp. (Also of interest is Terminal Report, Agricultural Cooperative Project in Guatemala, October 1976, by David Fledderjohn. Published by Agricultural Cooperative Development International.)

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Deere, Carmen Diana and Magdalena Leon de Leal. Women in Andean Agriculture: Peasant Production and Rural Wage Employment in Colombia and Peru. Women, Work and Development, No. 4. 1982. ILO Publication, International Labour Office (ILO), CH-1211 Geneva 22, Switzerland.

Presents the results of a study undertaken to explore the extent to which women in three Andean regions in South America participate in agriculture, and to examine the impacts of socio-economic change in the sexual division of labor in Andean agriculture production. Noting that despite the characterization of agriculture in this region as a male farming system, women are active participants in the agricultural sector. The authors draw on the work of Ester Boserup in their analysis of existing variations in the sexual division of labor and the conceptual categories defining male and female farming systems. They suggest that in order to be conceptually useful, "the categorization of gender-based farming systems must take into account all of the activities associated with farm production", and not just field labor. While agriculture in these regions might be more accurately described as "family farming systems", they caution that such a characterization still requires qualification in terms of the conceptual criteria used in defining the varied patterns of participation by men and women in agricultural production. 172 pp.

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Development Alternatives, Inc. (DAI). Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects. Volumes I, II, and III. 1975. DAI, 1823 Jefferson Place, N.W., Washington, D.C. 20036, USA.

Three documents, prepared for the Agency for International Development, summarize findings of a detailed study of 36 rural development projects in Africa and Latin America. The investigation was conducted to determine methods to improve the design and implementation of projects for small farmers. Volume I [497 pp.] analyzes rural development in Africa and Latin America. Volume II [410 pp.] presents case studies of the projects, describing goals, implementation methods, benefits, and prospects for self-sufficiency and replicability. Of particular interest are the issues relating to design and implementation that are raised at the end of each case study. Among the projects described is the Maasai Rural Training Centre in Kenya. The Executive Summary [52 pp.] reviews the main points discussed in the first two volumes. Findings suggest that the involvement of farmers in the decision-making process and their commitment of resources to the project are key elements in maximizing its success. (A revised version of Volume III, Executive Summary, by Kenneth Neff, is available from the Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.)

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Eicher, Cark K., Merritt W. Sargent, Edouard K. Tapsoba, and David C. Wilcock. An Analysis of the Eastern ORD Rural Development Project in Upper Volta: Report of the MSU Mission. African Rural Economy Working Paper No. 6, 1976. Department of Agricultural Economics, Room 202, Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, USA.

Examines the implementation and potential of Upper Volta's rural community development strategy which involves organizing development activities at the regional level through regional development organizations (ORDs). This report summarizes the observations and economic analyses of various aspects of agricultural development in the Eastern Region including infrastructure development, marketing systems, production systems, credit programs, the livestock subsector, and training of ORD staff. Some of the recommendations emerging from the evaluation are that planning horizons should be extended to ten to twenty years, contingency planning should be given more weight in ORD campaigns, and extensive efforts should be made to gather baseline information to facilitate research and project planning. 106 pp. (Also available in French as Une Analyse de Projet de Developpement Rural dans l'ORD de l'Est en Haute-Volta: Rapport de la Mission MSU. 127 pp.)

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Eide, Wenche B., Else Skjonsberg, Achola Pala, and Abjoulaye Bathily. Women in Food Production, Food Handling and Nutrition. With Special Emphasis on Africa. Final Report, June 1977. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Reviews currently available information on the role of women in food production in Africa. The report assesses the adequacy of current research, indicates linkages between food status and various aspects of women's roles in food production, and identifies new directions in research. The authors recommend that more inclusive studies be done in African contexts. 223 pp.

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Farming Systems Research Group. Working Papers Series. 1980-1981. Available from International Studies and Programs, 211 Center for International Programs, Michigan State University, East Lansing, Michigan 48824, USA.

Farming Systems Research (FSR) represents an approach to development in which a number of disciplines bring their knowledge to bear on problems in those areas where biology, physical technology, economics, and sociology are interrelated. During the 1980-1981 academic year, members of the FSR group at Michigan State University prepared a series of 13 working papers that have now been published. The authors present a variety of perspectives on FSR and what the approach may contribute in the future.

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Food and Agriculture Organization of the United Nations (FAO). Guidelines for the Integration of Women in Agriculture and Rural Development Projects. Doc. No. W/K64542. 1977. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Presents guidelines to help determine the extent of women's participation in agricultural projects and to identify areas in planned and existing projects where the women's part can be strengthened or increased. Includes a model checklist for planners working toward those ends. 8 pp.

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Food and Agriculture Organization of the United Nations (FAO) and the United Nations Development Programme (UNDP). Asian Survey of Agrarian Reform and Rural Development. "Starting From Below": Regional Project Findings and Recommendations. AG:DP/RAS/72/024. Terminal Report. 1977. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

Reports the results of a UNDP/FAO-sponsored project designed to identify the factors that have limited the active participation of small farmers in agricultural and rural development programs in Asian countries. The sequence of project activities was as follows: (1) in each country workshops were conducted in the field for government officials and small-farm representatives as part of the problem-identification process; (2) a regional follow-up seminar was then convened to discuss and recommend how governments could improve agricultural services to rural populations by encouraging more grassroots participation in program development; and (3) field action projects, utilizing the seminar's recommendations, were then implemented in three of the countries — Nepal, Bangladesh, and the Philippines. The report contains detailed recommendations based on these field action projects. Among other things, it recommends expanding and replicating field action programs for small farmers and limiting external assistance to encourage greater reliance on local resources. The importance for future development of effective mobilization of local resources is emphasized, if a better balance is to be realized between governmental goals of higher productivity and rural stability and the needs of rural populations for better employment opportunities and a larger voice in development decision-making. 54 pp.

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Fordjor, P.K. (ed.). Agricultural Development in Savannah Ghana. 1980. Institute of Adult Education, University of Ghana, P.O. Box 31, Legon, Ghana.

A report of the proceedings of the 1980 Easter School of the Institute of Adult Education, University of Ghana, held in Bolgatanga. The report includes lectures, introductions to panel discussions, and workshop reports on irrigation, extension, and the role of small-scale farmers, both men and women, in the development of savannah agriculture. Of particular interest is the list of recommendations from the workshop on women's participation in savannah agriculture. 54 pp.

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Fortmann, Louis. Tillers of the Soil and Keepers of the Hearth: A Bibliographic Guide to Women and Rural Development. Bibliography Series No. 2. 1979. Rural Development Committee, Center for International Studies, Cornell University, Ithaca, New York 14853, USA.

Presents source materials on women and rural development, with emphasis on Third World countries. Compiled especially for people who are teaching, researching, or involved in field programs centered around women and rural development. Includes bibliographies, publications, and resource materials divided into the following categories: General, Agriculture, Economic, Participation, Education, Law, Family, Population, and Ethnography. Entries are cross-indexed by country. 53 pp.

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Fortmann, Louise. Women's Involvement in High-Risk Arable Agriculture: The Botswana Case. 1980. Office of Women in Development (PPC/WID), Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Reviews the literature on women's role in arable agriculture in Botswana. The author identifies two key problems: women's limited access to use of draft animals and to agricultural labor. She presents arguments both for and against keeping women in agriculture, and concludes by recommending that programs be created to assist them — for example, introducing alternative crops that are less labor-intensive, and sponsoring appropriate social welfare measures. 32 pp.

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Fresco, Louise. "Crocodile Farming as a Small Farmer Project." Approach. No. 7. 1979. International Agricultural Centre, Lawickse Allee 11, 6700 AE Wageningen, The Netherlands.

Describes the National Crocodile Project which has been operating among traditional hunters and gatherers in Papua New Guinea for over 10 years. Crocodile farming is encouraged in remote areas for several reasons: the prices the skins fetch on the world market more than cover the production and transport costs; baby crocodiles and the other inputs are all locally available; the by-products are recyclable; the activity does not hamper the other subsistence activities of the villagers; and crocodile farming is culturally acceptable. The author discusses many of the difficulties faced by the project and points out the long-term dangers of focusing on individual remuneration or large scale, capital intensive farms in areas where tradition has stressed group efforts. pp. 38-44.

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Ghai, Dharam, Eddy Lee, Justin Maeda, and Samir Radwin (eds.). Overcoming Rural Underdevelopment. 1979. International Labour Organization (ILO), ILO Publications, International Labour Office, CH-1211 Geneva 22, Switzerland

Highlights a workshop on "Alternative Agrarian Systems and Rural Development", offered in April 1979 by the University of Dar Es Salaam and the International Labour Office. Researchers and policy makers from developing countries met in Arusha, Tanzania, to exchange views on the effectiveness of different agrarian systems in bringing about growth, equality, employment and participation. The report discusses innovative attempts at organizing agricultural production in twelve countries in Africa, Asia, and Latin America and evaluates patterns of land ownership, organization of agricultural production, the structure of incentives, and overall economic context of three agrarian systems — i.e., peasant agriculture under private land ownership, commercial farming, and transitional systems. Concludes with a discussion of the Ujamaa and villagisation program in Tanzania. 98 pp.

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Goering, Theodore J. Agricultural Land Settlement: A World Bank Issues Paper. 1978. World Bank, 1818 H Street, N.W., Washington, D.C. 20433, USA.

Reviews the World Bank's lending policies for agricultural land settlements in light of past projects. The author discusses evaluations of previous projects and presents recommendations for those seeking assistance from the World Bank in the future. Includes statistical charts and brief descriptions of selected projects funded by World Bank. 73 pp.

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Goldsmith, Arthur A. and Harvey S. Blustain. Local Organization and Participation in Integrated Rural Development in Jamaica. Special Series on Rural Local Organization No. 3. 1980. Rural Development Committee, Center for International Studies, 170 Uris Hall, Cornell University, Ithaca, New York 14853, USA.

Beginning with the premise that "community participation in local organizations is crucial for rural development", the authors conduct a formal survey of local agricultural organizations in two regions of Jamaica known as the Two Rivers and Pindars River Watersheds. After considering social and economic characteristics of the two areas, the authors review the functions and structures of local agricultural organizations and the degree of farmer participation in these groups. The results of the survey are intended to provide background information for a subsequent integrated rural development project which will have an objective of stimulating local participation in rural development activities. This study indicated that participation is limited at present, but that there exists an organization in the area called the Jamaican Agricultural Society which has the potential to develop into an active participatory rural development institution. 144 pp.

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Gostyla, Lynn and William F. Whyte. El ICTA en Guatemala: La Evolucion de un Modelo de Investigacion y Desarrollo Agricolas. 1980. Rural Development Committee, Center for International Studies, Cornell University, 170 Uris Hall, Ithaca, New York 14853, USA.

The Instituto de Ciencia y Tecnologia (ICTA) was created to help generate and promote technology appropriate to Guatemalan agriculture. The report presents an analysis of ICTA from the perspective of social scientists who sought to examine the research style in the ICTA. Researchers emphasize farmer-oriented participatory research in an effort to move away from traditional research and development models which are often based on scientists perceptions of farmer needs and concerns. The authors found the roles and domains of researchers, extension workers, and farmers needed to be reassessed and redefined in order to successfully integrate farmer involvement in research and development. 103 pp. (Also available in English as ICTA in Guatemala: The Evolution of a New Model for Agricultural Research and Development. 48 pp.)

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Halim, Abdul and Akmal Hossain. Women: Time Allocation and Adoption of Family Planning Practices in Farm Family. GTI Publication No. 23. 1981. Graduate Training Institute (GTI), Bangladesh Agricultural University, Mymensingh, Bangladesh.

Based on data collected from three project villages of the Agricultural University Extension Project of Mymensingh district, this report gives an in-depth account of the types of work, both agricultural and non-agricultural performed by women. Pays particular attention to the details of time scheduling. Findings reveal that the participation of females in homestead farming and kitchen gardening is about 62.5 percent. The study also investigates the spacing of children, and the extent of the adoption of family-planning practices by farm women. In light of the vital role played by women in agricultural production, and in furthering the welfare of their families, the authors recommend that all extension educational efforts be structured in ways that would benefit women as well as men. 30 pp.

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Hart, Robert D. and Antonio M. Pinchinat. Integrative Agricultural Systems Research. 1980. Available from Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

What is the best way to conduct agricultural research? The authors of this paper, which was presented at the "Inter-Caribbean Seminar on Farming Systems Research Methodology" in Pointe-a-Pitre, Guadeloupe, argue for a systems approach which focuses on the relationships among various hierarchial systems of both agricultural and socio-economic components. This approach requires an interdisciplinary team to conduct regional and farm system studies along with traditional controlled experiments involving the agro-ecosystems in order to properly integrate regional and local level influences into experimental design. Useful figures illustrate the process promoted by the authors. 14 pp.

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Henderson, Helen K. Women's Role in Livestock Production: Section 2.4.2 in Baseline Data Report, Village Livestock Project, Upper Volta. AID/afr-C-1338, 1980. Consortium for International Development, Executive Office, Utah State University, UMC 35, Logan, Utah 84322, USA.

A report on women's economic activities in the village of Koukandi in Upper Volta. Combining a formal questionnaire methodology with in-depth observations, the researcher traces differential patterns of livestock ownership, farming, and household work among the women of three ethnic groups in the village. The study links prevailing kinship, lines of authority, inheritance, and ownership with women's role in animal husbandry and agriculture. Also identifies leading women and women's groups within the community, and explores the potentialities of improving livestock production. Deploring the lack of communication between the government and village women — who are anxious to improve their living conditions — the report advises planners to work closely with a committee of village women. 180 pp.

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Hopcraft, Peter. Milk Pricing in Kenya. The Case of a Bulky, Perishable Commodity with Seasonally Varying Production Costs. Discussion Paper No. 266. 1978. Institute for Development Studies, University of Nairobi, P.O. Box 30197, Nairobi, Kenya.

Explores the issues surrounding the pricing of milk in Kenya. Since milk is a commodity whose production costs vary depending on the season, and for which storage and transportation costs are high, many problems arise in its pricing. Hopcraft examines the effects of a seasonally and locationally uniform pricing of milk as it is imposed on the dairy industry in Kenya. 15 pp.

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"Ineffective Farmers Groups and Bureaucratic Officials: Two Problems of Rural Development in Thailand." Ideas and Action. No. 110, 1976/3. Food for Hunger Campaign (FFHC)/Action for Development, Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Focuses on efforts of the Maeklong Integrated Rural Development Project in Thailand to revitalize farmers' groups in the area. Lists six generalizations regarding the formation of effective groups. Also includes suggestions on how the organizations could overcome some of their operational difficulties. pp. 11-13.

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Institut Africain Pour le Developpement Economique et Social (INADES)-Documentation. Alimentation et Nutrition en Afrique. 1981. INADES-Documentation, 08 Boite Postal 8, Abidjan 08, Ivory Coast.

A bibliography on food and nutrition in Africa, covering the world food problem; food-related research, industries, and customs; and nutrition and malnutrition, including methods and techniques of nutrition education. 58 pp.

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Institut Africain Pour le Developpement Economique et Social (INADES)-Documentation. Amelioration des Techniques de Cuisson: Technologies Appropriees 1. 1982. INADES-Documentation, 08 Boite Postal 8, Abidjan 08, Ivory Coast.

A bibliography on appropriate technology for improved methods of food preparation. Sections cover traditional fuels, biogas, and solar energy systems for cooking and storage. In French. 26 pp.

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Institut Africain Pour le Developpement Economique et Social (INADES)-Documentation. Stockage, Conservation et Transformation des Produits Alimentaires: Technologies Appropriees 3. 1982. INADES-Documentation, 08 Boite Postal 8, Abidjan 08, Ivory Coast.

A bibliography on appropriate technology for the storage, conservation, and processing of edible products. Separate sections cover post-harvest losses and information on specific foodstuffs. In French. 55 pp.

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Institute Masyarakat. Small Fishermen in Asia Speak Out. 1978. Asian Cultural Forum on Development (ACFOD), G.P.O. Box 2930, Bangkok, Thailand.

Reports on a seminar which brought together persons involved in small-scale fishing from Thailand, Philippines, Indonesia, Malaysia, and Japan to share information on common problems, practical solutions, needs, and rights. Major concerns voiced by the participants were not focused entirely on the low productivity of traditional fishing gear, market control by middlemen, or chronic indebtedness, but, more so, on new problems related to the encroachment of capitalist fishing and the destruction of fishing grounds by pollution, land reclamation, or housing development. Suggestions that emerged from the conference include advocating a new approach to development planning involving direct input from small-scale fisherfolk and, at the village level, promoting cooperative efforts to realize the rights and interests of those who depend on small boats for their livelihood. 58 pp.

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International Agricultural Centre (IAC). The Small Farmer and Development Cooperation. Final Report on the Preparatory Investigations. Vol. 1. n.d. IAC, Lawickse Allee 11, P.O. Box 88, Wageningen, The Netherlands.

Sketches characteristics of small farmers and their changing physical and socio-economic world. A major conclusion is that the incorporation of small farmers into large political and social systems without their active participation in project planning increases their dependence and helplessness and decreases their productivity through the rapid depletion of natural resources. Recommendations include drawing small farmers into the planning and evaluating stages of development projects, and developing technologies that they can control completely. Research suggestions are presented. 32 pp.

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International Agricultural Development Services (IADS). Agricultural Assistance Sources. Third Edition, 1980. IADS, 1133 Avenue of the Americas, New York, New York 10036, USA.

Gives information on organizations that provide developing countries with technical and financial assistance for agricultural activities. Covers 13 multilateral and regional assistance organizations, 5 non-profit and autonomous institutions, and 16 bilateral aid agencies. Includes information on the background and nature of each organization, its current programs in agriculture, assistance procedures, and expertise. 251 pp.

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International Agricultural Development Service (IADS). Agricultural Development Indicators: A Statistical Handbook. 1980. IADS, 1133 Avenue of the Americas, New York, New York 10036, USA.

Because data that are often used to show agricultural and economic development are frequently scattered among a number of sources, IADS has collected information on 23 such variables on 140 low income countries, organized them, and published them in this booklet. Within the document data are presented by region. Within each region a notation first indicates if a country is a 'crisis' country according to any one of four sets of internationally accepted criteria. Following this notation, statistics on the other 22 indicators, which are grouped into five categories, appear. Sources of these statistics are given. The five categories which describe the statistics are: Demographic, Politico-economic, Agricultural Production, Food Consumption, and Agricultural Inputs. Statistics on France, an industrial nation, are given as a point of reference. Of particular value to planners working at the national level. 28 pp.

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International Agricultural Development Service (IADS). IADS Report/1981. 1982. IADS, 1133 Avenue of the Americas, New York, New York 10036, USA.

An annual report providing a summary of the 1981 IADS activities throughout the world. Included in the report are three brief but substantive articles dealing with current trends in agricultural development efforts. "Technology-based agricultural development" [pp. 1-13] notes the relevance of lessons learned from previous experiences. Successful technology-based agricultural development depends on an operational framework incorporating the multiple components of research, training, and education, as well as enlisting the support and participation of national government leaders. "Elements of Successful National Crop Research Projects" [pp. 15-25] highlights the importance of an interdisciplinary approach to agricultural research projects and the need for close cooperation and collaboration among scientists, research institutions, field personnel, and government representatives. "Improving Food Policy" [pp. 27-33] looks at the way in which food systems (the interrelated activities of food production, distribution, and consumption) often suffer from common policymakers weaknesses. Improved processes of communication and information exchange are suggested as a means of more effectively linking policymakers with researchers and farmers. pp. 77.

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Isaacman, Barbara, and June Stephen. Mozambique: Women, the Law, and Agrarian Reform. 1980. African Training and Research Centre for Women, (ATRCW), United Nations Economic Commission for Africa (UNECA), P.O. Box 3001, Addis Ababa, Ethiopia.

Since gaining its independence in 1975, Mozambique, has faced and continues to confront new challenges, one of which is the establishment of a legal system which effectively promotes sexual equality. This report examines specific features of the new constitution directed toward emancipating women from traditional roles and evaluates the impact, thus far, of this legal framework for agrarian reform. Although many women are still subject to subordinate roles in the home, the community, and even the new institutions established by the new government, advances have been made and women are demanding more involvement in responsible activities. 148 pp.

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Janelid, Ingrid. Funcion de la Mjuer en la Agricultural de Nigeria. 1975. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Based on a paper presented at a national seminar on planning for the development of the economic system of the family, held December 1974, in Ibadan, Nigeria, this monograph describes the socio-economic function of peasant women in Nigeria. It claims that women are as active as men in agriculture, but that they are often excluded from rural development projects because they are defined as domestic agricultural workers and not regarded as economically active. Cites a study which found that Yoruba women in eastern Nigeria enjoyed considerable economic independence and occupied important positions in agriculture and commerce, especially in local food production. In Spanish. 18 pp.

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The Joint Commission on Rural Reconstruction (JCRR). JCRR and Agricultural Development in Taiwan, 1948-1978. 1978. JCRR, Taipei, Taiwan, Republic of China.

An historical sketch of agricultural development in Taiwan, as carried out by the JCRR during its first 30 years of operation. This amply illustrated book describes the results of the major emphases of JCRR's early programs--implementing land reform, strengthening farmers' associations, introducing new crops and varieties, and improving farming methods--as well as specific activities related to forestry and water resources development, soil conservation, livestock and fisheries production, rural health, and agricultural extension and credit. In 1972 an Accelerated Rural Development Program (ARDP) was initiated to stimulate further agricultural growth through attention to regional agricultural planning, new technology, agricultural marketing and processing, and resources and the environment. The document also outlines future directions of the JCRR's work toward increasing farmers' income through various policies and programs. In Chinese and English. 207 pp.

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Joshi, Chandhi. Profile of Women in Agriculture and Rural Development in Nepal. 1980. Panchayat Ministry, Training Material Production Centre, Jawalakhel, Lalitpur, Nepal.

Prepared for a national planning and policy-making seminar, this booklet provides a historical overview of women's participation in Nepalese society. Data on women's involvement in agriculture, education, and family and social life are examined. Using the information provided in this report, the National Seminar proposed a series of programs to improve the life of Nepalese women, including programs related to information management, and programs to increase the participation of women extension workers in agriculture. 78 pp.

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Khan, Akhtar H. A Review of Extension Principles. 1976. Available from Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

Describes experiences with the Comilla Project in Bangladesh, in which orthodox assumptions of agricultural extension and community development were tested and found wanting. While official village-level workers (VLWs) could persuade large, solvent landowners to adopt new practices, little of the rest of the US-European pattern carried through. Subsistence farmers, in the majority, faced physical and economic obstacles that could be surmounted only by group organization, did not accept the "gentry" as models to follow, and lacked trust in the VLWs as agents of change. Revised approaches that mobilized village groups first to "work from the bottom up" brought greater success. 7 pp.

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Kooijam, Kunnie. Bokaa: Living and Learning in an African Village. IEC Broadsheets on Distance Learning No. 14. 1980. International Extension College (IEC), 18 Brooklands Avenue, Cambridge CB2 2HN, England, UK.

The traditional, informal educational process that used to maintain the rural way of life in many rural African villages is no longer sufficient. However, formal education aids only those who leave the village. This report seeks to help in finding a method of education that will assist those continuing to live within a rural village, in this case, Bokaa. The author examines the socialization and employment of the villagers, problems arising as a result of change, and how the educational system effects the agricultural practices of these people. 102 pp.

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Kulp, Earl M. Designing and Managing Basic Agricultural Programs. 1977. Program of Advanced Studies in Institution Building and Technical Assistance Methodology (PASITAM) Publications, 1005 East Tenth Street, Bloomington, Indiana 47401, USA.

Noting the failure of many development programs to reach the rural poor, the author sets out to address the fundamental problem of delivering the necessary services that will help peasant farmers to modernize, and generate higher living standards through improved production practices. The emphasis is on developing better planning and management tools, rather than on capital investments, as the means to achieve higher productivity. The author first defines the basic concepts underlying these tools in terms of the "systems analysis" approach to farming. He then outlines fundamental policy elements undergirding this integrated approach and applies the steps delineated to examples in two countries — Senegal and Madagascar — where successful development of peasant agriculture has taken place. The remainder of the volume discusses the methods used in analyzing, planning, managing, and implementing programs aimed at peasants, using both quantitative and qualitative tools. Exercises in practical applications of the techniques discussed are provided. 280 pp.

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Kumar, Ajoy. An Experimentation with Blue Green Algae in Tribal Agriculture. 1980. Diocesan Director for Development, Kunkuri, 496225, Ralgarh District, Madhya Pradesh, India.

This document introduces the Jagruk Kisan Programme and provides technical information on the Blue Green Algae experiments in the tribal rice paddies of the Raigarh district in Madhya Pradesh. The Jagruk Kisan Programme is aimed at teaching young tribal farmers "how to utilize their available resources to attain self-reliance in development." The Programme has organized farmers into village level classes for weekly sessions taught by agricultural educators. The Blue Green Algae Experiment is intended to provide farmers with an inexpensive bio-fertilizer through the local growth and cultivation of blue green algae. Using easily built earthen algae tanks, loamy soil, stones, polythene sheets, and a small amount of blue green algae culture, the rice farmers have a readily available bio-fertilizer. 10 pp.

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Kurian, Rachel. Women Workers in the Sri Lanka Plantation Sector: An Historical and Contemporary Analysis. Women, Work and Development No. 5, 1982. ILO Publications, International Labour Office (ILO), CH-1211 Geneva 22, Switzerland.

Examines the social and economic characteristics of women working in plantation agriculture in order to highlight inequities women face for policymakers concerned with achieving economic growth and social equity. The study focuses on the important historical factors which have determined, in part, the present role of female labor; the impact of plantation work in the daily life of the female estate worker; the limited control by women over household income and expenditure; the relation of welfare facilities, such as, for medical care or housing, to the needs and wants of women; and the effect of unionization in slightly improving working conditions while generally ignoring other inequities for women. The author suggests that policies which work against the interests and without the consent of women will also work against the interests of the plantations, and that the trade union movement is useful for including women in developing effective policy but needs to make a greater effort to involve women in its activities. 138 pp.

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Lele, Uma. The Design of Rural Development: Lessons from Africa. 1975. International Bank for Reconstruction and Development, 1818 H Street, N.W., Washington, D.C. 20433, USA.

Based on the results of a major study of rural development policies and programs in sub-Saharan Africa, the author makes recommendations concerning the design and operation of future development projects to raise the productivity of the rural poor. Throughout the book, she emphasizes the need for an overall policy and an institutional framework conducive to the objectives of rural development. Project reviews on agricultural credit, marketing, and training in seven nations provide useful insights for those interested in helping small groups generate income in rural areas. 246 pp.

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Leon de Leal, Magdalena and Carmen Diane Deere, with Ingred Caceres G. et al. Mujer y Capitalismo Agrario: Estudio de Cuatro Regiones Colombianas. 1980. Asociacion Colombiana para el Estudio de la Poblacion (ACEP). Carrera 23 No. 39-82, Bogota, D.E. 1, Colombia.

Seeking to place the rural Colombian woman in regional and historical perspective, this study analyzes the sexual division of labor at home and in the market, and explores woman's contribution to the economy and the effects of the development of capitalism on their participation. Notes that work done by rural women is closely related to the socio-economic position of the peasant family, and concludes that although female participation in the rural areas is important, women's role is that of helpers who participate sporadically in agricultural activities when demand is very acute. Thus, in effect, women constitute a reserve labor force in agriculture. In Spanish. 295 pp.

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Lewis, Barbara C. (ed.). Invisible Farmers: Women and the Crisis in Agriculture. 1981. Office of Women in Development (PPC/WID), Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

A collection of eight papers, originally compiled to provide background for the US delegation to the World Conference on Agrarian Reform and Rural Development held in Rome in 1979, documents the "invisibility" of women in the substance of policy formulation for rural development. By highlighting the role of women in agricultural research and extension; and the obstacles for rural women with respect to legal access to land, access to primary education, and political organization; these papers emphasize the potential gains to be made from recognizing the role of women in rural development, and note the costs in terms of equity and national development from not having done so. 456 pp.

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Lewis, Martha Wells. Women and Food: An Annotated Bibliography on Family Food Production, Preservation and Improved Nutrition. n.d. Office of Women in Development (PPC/WID), Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Describes publications, papers, and resource materials on growing vegetables, raising small animals, and improving nutrition through family food production. Additionally covers appropriate technology for women's food production tasks. This useful guide to the literature also has descriptions and evaluations of selected vegetable garden projects, and a Resources Section. 47 pp.

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Livingstone, Ian. Economic Irrationality Among Pastoral Peoples in East Africa: Myth or Reality? Discussion Paper No. 245. 1977. Institute for Development Studies, University of Nairobi, P.O. Box 30197, Nairobi, Kenya.

Examines the "theory of pastoral conservatism" from an economist's perspective, and questions the usefulness of the "cattle complex" concept. Argues that cattle raising patterns must be examined in the context of the overall socio-economic framework of the people. Using data from East Africa, the author presents an alternative explanation suggesting that "excess cattle population may simply be associated with an excess human population", and notes that assessments of "proper stocking level" must consider both stock-to-land ratio and stock-to-human ratio. 21 pp.

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Mann, Wirsa Singh. Sudan Cooperative Societies: Present Structure and Traditional Origins. Arbeiten No. 57. 1977. Forschungsinstitut der Friedrich-Ebert-Stiftung, Abteilung Entwicklungslanderforschung, Dokumentationsstelle, Kolnerstrasse 149, 5300 Bonn-Bad Godesberg, Federal Republic of Germany.

Focusing primarily on agricultural cooperatives, the author outlines the development of the modern cooperative movement in Sudan and states that its success can be attributed historically to strong traditional forms of cooperation and the influence of Islam. Describes the structures of both modern and traditional types of cooperatives that co-exist in Sudan today. 24 pp.

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Matlon, Peter J. Income Distribution Among Farmers in Northern Nigeria: Empirical Results and Policy Implication. 1979. African Rural Economy Paper No. 18. Department of Agricultural Economics, 202 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, USA.

An empirical analysis of farm family income based on data collected from three villages in Northern Nigeria. Distribution and sources of household income are identified by income class, and this information is further analyzed in terms of demographic characteristics, enterprise choice, and farm/off-farm activities, to distinguish important factors affecting income generation and distribution. Policy recommendations for addressing problems of inequitable distribution and low income-generating capacities of current technologies are provided. 117 pp.

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McCarthy, Florence E. Differential Family Characteristics as the Context for Women's Productive Activities. Study Paper No. 1. 1981. The Women's Section, Ministry of Agriculture and Forests, Dacca, Bangladesh.

This paper is part of a larger study designed to explore the productive activities of rural women in Bangladesh in light of increasing class disparities within the rural population. Along with documenting rural women's involvement in post-harvest processing operations, the study also explored variations in processing techniques among different families. In this paper the author argues that in order to understand family-based variations in processing activities, one must first identify and analyze differential family characteristics and their effect on women's involvement in productive activities. The author investigates variations in women's family size, and access to land and other resources (such as wages). 43 pp. In a second paper based on the same study, (entitled Patterns of Involvement and Participation of Rural Women in Post-Harvest Processing Operations, Study Paper No. 2, 1981), the same author looks at the specific activities involved in both family/household work and post-harvest rice processing, the time allocated the various tasks, and the number of women involved in any particular segment of the rice processing operation. Also explored is the way in which labor is divided among female family members, providing a kin-based work structure. The author notes that while the work activities related to family and household maintenance continue throughout the harvest season, the pace and intensity of women's labor efforts is significantly increased due to the pressure of post-harvest work responsibilities. 54 pp.

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McGrath, Mary Jean (ed.). Cooperatives, Small Farmers and Rural Development. University Center for Cooperatives, University of Wisconsin-Extension, 524 Lowell Hall, 610 Langdon St., Madison, Wisconsin 53706, USA.

Recognizing the need to develop and strengthen institutional structures to support new agricultural technologies, this document reports on a project involving a series of workshops designed to explore how cooperatives, as a development tool, might contribute to development assistance programs among the rural poor overseas. The workshops were held with major US cooperative associations and federations to discuss the role these institutions might play in economic and social development abroad. Through additional meetings held in Africa, Asia, and Latin America, people from these regions were consulted on their views of the role of cooperatives in development programs, as well as problems related to external assistance and its impact on local cooperatives. Summaries of four background papers prepared for the project are presented, along with an extensive collection of abstracts of recent literature concerning cooperatives, small farmers, and development. Also included is a listing of participants in the various workshops. 132 pp.

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Mitchnik, David A. The Role of Women in Rural Zaire and Upper Volta. Oxfam Working Paper 2. 1977. International Labour Organization World Employment Programme (ILO). Available from OXFAM, 274 Banbury Road, Oxford OX2 7DZ, England, UK.

A comparative field study of the effects of development on women in rural communities in Zaire and Upper Volta. The author examines the social and economic activities of rural families, pointing out contrasts in the male-female divisions of labor. He also addresses the inadequacies of formal and non-formal educational programs in these countries for rural women. Agricultural extension and development projects are criticized for a lack of sensitivity to the social and economic realities of rural communities: women have been excluded from training and participation in innovation in agricultural methods, and emphasis on male-dominated cash-crop production has created numerous problems for women who perform the important subsistence farming tasks. 36 pp.

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Mohan, P.C. "Of the Women, By the Women, For Everybody: A Goat Project in Kenya." Ideas and Action. No. 144, 1981/6. Freedom from Hunger Campaign/Action for Development (FFHC/AD), Food and Agriculture Organization of the United Nations (FAO), Via delle Terme de Caracalla, 00100 Rome, Italy.

Initiated in 1978 in response to a need for animal protein sources, the Samia Women's Goat Project in Busia District Kenya, is outlined and reviewed in this article. Backed by the Kenya government and by international organizations, the members of five women's co-operatives originally owned and cared for 20 goats communally. As the project progressed, communal ownership gave way to individual ownership and the project widened its scope to include such activities as raising chickens and developing a small fishing industry. The article assesses the benefits derived from the project, including an increase in the supply of and demand for goats' milk, and additional knowledge about credit and savings among the village women. pp. 18-21.

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National Research Council. Tropical Legumes: Resources for the Future. 1979. Commission on International Relations, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418, USA.

In the process of increasing worldwide agricultural yields, nitrogen fertilizer has become an expense which few Third World farmers can afford. Thus legumes, with their high protein content and their ability to bio-logically fix nitrogen in the soil, take on a new and practical importance. This book examines a variety of little known and under-utilized legume crops, selected for their nutritional value and ease of growing. It includes general descriptions of each crop, consisting of its uses and limitations, and recommendations for research. A useful table comparing the nutritional values of many legume varieties is included in the appendixes. 331 pp.

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Nestle Foundation. Annual Report 1981. Nestle Foundation for the Study of the Problems of Nutrition in the World, 1001 Lausanne, Switzerland.

Summarizes the activities of the Nestle Foundation for the Year 1981. Also includes four essays contributed by persons involved in field research on various aspects of the world hunger problem. The first two essays--"The Fight Against Hunger-Strategies in the Eighties" by H. Aebi, and "Food and Power" by Sir K. Baxter--consider the political, cultural, and economic components of development strategies aimed at alleviating hunger and poverty. The final two essays--"Nutritional Problems Encountered by Physicians Working in Countries of the Third World' by G.P. Ravelli, and "International Advanced Courses in Human Nutrition Science" by J.G.A.J. Hautvast--focus on the problem of malnutrition and the need for increased educational development as part of any long term solution to world hunger. 69 pp.

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Nji, Ajaja. "Technology, Women, Agricultural and Rural Development in Africa." Approtech. Journal of the International Association for the Advancement of Appropriate Technology for Developing Countries (IAAATDC). Vol. 3, Nos. 2 and 3, September 1980. IAAATDC, University of Michigan, 603 East Madison, Ann Arbor, Michigan 48109, USA.

Discusses the role of African women in agriculture and examines the effect of technology on social relationships in Africa. Argues that while technology may improve productivity, it could also have the hidden negative function of disproportionately increasing the workload of women. The author concludes that technical innovation which does not take into account traditional socio-economic and cultural relationships will not bring about significant agricultural and rural development in Africa. pp. 3-8.

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O'Kelly, Elizabeth. Rural Women: Their Integration in Development Programmes and How Simple Intermediate Technologies Can Help Them. 1978. Available from Elizabeth O'Kelly, 3 Cumberland Gardens, London WC1X 9AF, England, UK.

Surveys women's roles in agricultural Asia and Africa including case studies from Malaysia and Cameroon. Studies detail the development of agriculturally-based organizations that gradually added social and educational components. Identifies organizations concerned with intermediate technology, manufacturers of some of the equipment suggested in the book, and literature related to specific intermediate technology techniques. 84 pp.

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Okidi, Odidi C. Kenya's Marine Fisheries: An Outline of Policy and Activities. Occasional Paper No. 30. 1979. Institute for Development Studies, University of Nairobi, P.O. Box 30197, Nairobi, Kenya.

Because of significant contributions to nutrition needs and to the economy, fisheries have an important place in developing countries' strategies to meet their development goals. With the onset of the Law of the Sea negotiations, management of marine resources has gained considerable worldwide attention with particular concern focused on designing national programs to ensure conservation and rational use of these resources. In this document the author examines marine fishing in Kenya's coastal waters in light of its impact on the coastal populations; its contribution to Kenya's commercial economy; government efforts to develop national fishing industries; and the presence of foreign fishing fleets in Kenyan waters. 42 pp.

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"Organizing Small Farmers for Development: Lessons from Latin America." PASITAM Newsletter. No. 13, February/March/April 1977. Program of Advanced Studies in Institution Building and Technical Assistance Methodology (PASITAM), Indiana University, Bloomington, Indiana 47401, USA.

Reports on a study of nine programs in Ecuador and Honduras. Concludes that efforts to organize small farmers for development are most successful when done with concrete goals that are attainable within a limited time through cooperation among participants in small group settings. Suggests that international projects tend to focus on large-scale organizational structures that seldom recognize the farmers' interest in acquiring land and treat organizing more as an end than as a means. 46 pp. (Summarizes Intercountry Evaluation of Small Farmer Organization: Ecuador, Honduras, Final Report. Nov. 1976, Judith Tendler, Office of Development Programs, Bureau for Latin America, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.)

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O'Sullivan-Ryan, Jeremiah. Rural Development Programs Among Marginal Farmers in the Western Highlands of Guatemala. 1978. The Institute for Communication Research, Stanford University, Stanford, California 94305, USA.

Agricultural production, and land, income, and resource distribution are among the topics the author discusses in an examination of the positive and negative factors affecting the marginal peasants in Guatemala. He outlines four rural development strategies and their consequences: the extensionist model, exemplified by the national agricultural extension service; the training model, a systematic instructional approach combining theory and practice in farmer training programs; the cooperative or self-help approach, based on the philosophy that rural development should start with the people themselves; and the integrated approach, based on a combination of factors such as appropriate technology, education, and marketing. 132 pp.

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O'Sullivan-Ryan, Jeremiah. "The Role of Information in the Life of the Subsistence Farmer: A Study of the Guatemalan Western Central Highlands." ALA: African-Latin America-Asia. No. 7, 1979. College voor de Ontwikkelingslanden, Universiteit Antwerpen, A. Coemaerelei 52, B-2000 Antwerpen, Belgium.

An analysis of the role of information and extension services in promoting change in the lives of subsistence farmers who do and do not receive extension and cooperative services. The author concludes that the availability of services is related to the size and location of farms as well as social and cultural characteristics. Because of the structural limitations which affect extension services, some farmers presently not being reached could not take advantage of the resources even if they were available. The author makes several policy recommendations, for example, directing resources to smaller farmers, developing an infrastructure for vegetable and flower markets, and promoting and defending the rights of poor subsistence farmers. In English, with summaries in Dutch, French and Spanish. pp. 20-61. (A report of the study, entitled Rural Development Programs among Marginal Farmers in the Western Highlands of Guatemala [1978, 132 pp.], and a paper in Spanish, El Papel de la Education y la Informacion en la Distribucion del Ingreso y la Productividad Agricola [1978, 21 pp.] are also shown available from: The Director, Institute for Communications Research, Stanford University, Stanford, California 94305, USA.)

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Pacey, Arnold. Gardening for Better Nutrition. n.d. Intermediate Technology Publications Ltd., 9 King Street, London WC2E 8HN, UK.

Describes how women gardeners and other food producers left out of commercial crop-oriented extension services can grow vegetables for family consumption. Discusses illnesses associated with poor nutrition, vegetables most relevant to their prevention, and conditions necessary for cultivation of specific crops. Makes references to numerous case studies. Of particular interest to nutrition planners. 64 pp.

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Pala, Achola O. African Women in Rural Development: Research Trends and Priorities. Overseas Liaison Committee (OLC) Paper No. 12. 1976. OLC, American Council on Education, One Dupont Circle, Washington, D.C. 20036, USA.

Suggests that neglect of the central role women have traditionally played in agriculture and food production has resulted in the loss of this important human resource potential for developing countries. Argues that an acceptable notion of rural development planning must include historical understanding of the different effects colonial economic demands have had for rural men and women, and that suggestions for rural change must be tempered by an awareness of political and economic realities. The author stresses that, ultimately, developing countries should take responsibility for identifying their own specific priorities for research. She does, however, offer a list of general research areas relevant to African rural development. These include land access and use rights, allocation of labor, time management, domestic decision-making, job migration, agricultural training, women's participation in marketing and cooperatives, women's self-help groups, women's role in pastoral societies and marginal areas, and family planning, nutrition and health. 35 pp.

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Park Chung Hee. Saemaul: Korea's New Community Movement. 1979. The Secretariat for the President, The Republic of Korea, Seoul, Korea.

Saemaul Undong, a community modernization movement, was initiated in the rural villages of Korea in 1971, and has since spread to virtually all areas of Korea. Its success in sparking worker participation and cooperation in the agricultural sector, and later in the industrial and urban sectors, has lead to its international acclaim. This document, a series of speeches by the president of Korea and the founder of the movement, outlines the basic premises, policies and projects of Saemaul Undong, as well as future projections regarding further agricultural development efforts. 266 pp.

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Pinchinat, A.M., J. Soria, and R. Bazan. Multiple Cropping in Tropical America. n.d. Department of Tropical Crops and Soils, Tropical Agricultural Research and Training Center (CATIE), Turrialba, Costa Rica.

This paper focuses on improving agricultural production among small farmers through multiple cropping methods. While intercropping is not a new phenomenon to tropical America, it is believed that continued research in the multiple cropping arena will contribute to improved agricultural production systems which fit the ecological, social and economic circumstances of a particular region. The authors note that throughout tropical America experiments ranging from sequential to intercropping have provided valuable information with regard to crop combinations which may provide the best results. Other research, utilizing low technology and intercropping, has demonstrated that, in terms of total production, this method is more profitable than the monocropping method. The authors recommend that research be undertaken to develop technology more suitable and more acceptable to the small farmer populations. In addition, they recommend that specialists in ecology, sociology, agriculture and related fields combine their efforts and work directly with local farmers to develop appropriate agricultural systems relevant to the climate and the socio-economic conditions of the farm community. 12 pp.

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Programmes for Better Family Living (PBFL). Enlightening the Family. n.d. PBFL, P.O. Box 30470, Nairobi, Kenya; or Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

A manual intended for leaders of adult education groups to help them make group discussions interesting and relevant and give practical demonstrations related to health, nutrition, child development, family planning, and agriculture. The manual suggests stimulating questions in each of these areas and provides substantive information on problems and detailed instructions for solving them. The lessons were originally prepared for use in Machakos District of Kenya, but may be adapted for use in other rural areas as well. An appendix includes recipes for infant foods. 175 pp.

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"Punta del Diablo: An Artisanal Fisherman's Cooperative in Uruguay." Ideas and Action, No. 125, 1978/6. Food for Hunger Campaign/Action for Development, Food and Agriculture Organization of the United Nations, Via delle Terme di Caracalla, 00100 Rome, Italy.

Directed towards planners and cooperative members, this interview with the PESCO cooperative's manager describes the cooperative's history, its operation, and future plans. pp. 6-12.

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Ramarkishna, B. and Maria Cristina de Araujo. Analisis de Contenido de los Mensajes Agricolas en la Prensa y Radio Venezolana y su Utilidad Segun los Campesinos del Estado Monagas. Fundacion para el Desarrolle de la Region Centro Occidental de Venezuela (FUDECO). Serie Investigacion Social y Educativa No. 11. 1978. FUDECO, Apartado 523, Barquisimeto, Venezuela.

Reports on a content analysis of agricultural messages in the Venezuelan radio and press concluded between 1972 and 1974 to examine the role of the mass media in rural development. The study found that the national and local press dedicated little space to agricultural news. The articles that did appear were of too general a nature and had an urban bias, so that they were of little use to peasants. Radio is the mass medium most utilized by the peasants, but only 24 percent of the 96 local radio stations broadcast agricultural programs, revealing a lack of concern for the rural sector. Peasants who were interviewed expressed an interest in learning about technical aspects of agriculture, local crop cultivation methods, and urgent social problems through the radio. In Spanish. 45 pp. (Also in the FUDECO Series is Investigacion sobre Radio-Foro como Metodo para Lograr Participacion Campesina y una Efectiva Divulgacion Agricola [No. 8, 1978, 36 pp.], an account of a pilot study on the proper use of radio in an agricultural context, which discusses the creation of Radio-Foro, an attempt to combine radio programs and technical assistance.)

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Reeves, Edward B. and Timothy Frankenberger. Socio-Economic Constraints to the Production, Distribution, and Consumption of Millet, Sorghum, and Cash Crops in North Kordofan, Sudan Report No. 1. 1981. Department of Sociology, College of Agriculture, University of Kentucky, Lexington, Kentucky 40546, USA.

Report of an ongoing project in Sudan conducted by the University of Kentucky. The first chapter outlines the original project plans, problems encountered in implementing them, and the necessary revisions of these plans. The document also presents the findings thus far of the project as a whole. Preliminary recommendations suggest that a seed propagation and distribution program is needed for millet, sorghum, sesame, and groundnuts; that agricultural extension agents are in need of vehicles, spare parts, and fuel in order to carry out work in this area; and that entomologists should further study the life cycle of the sinta beetle, to aid farmers in combating this insect as it does the most damage to their millet crops. 72 pp.

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Riley, Harold M. and Michael T. Weber. Marketing in Developing Countries. MSU Rural Development Series, Working Paper No. 6. 1979. Department of Agricultural Economics, 216 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, USA.

A review of strengths and shortcomings of past research in the area of marketing in developing countries. The authors point out that a static and competitive model of economics limits researchers' assessments and conclusions. A more dynamic "food system" model that encompasses other sectors when planning for the agricultural sector is proposed. The paper contains an illustration of such a model, set up by a Michigan State University research team for marketing purposes in Northeast Brazil. Food production, food processing and food distribution are approached as equally important components of the whole food system. Also included is a set of questions useful in conducting research. 30 pp.

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Sandford, Stephen. Keeping an Eye on TGLP. Working Paper No. 31. 1980. National Institute of Development and Cultural Research (NIR), Documentation Unit, University of Botswana, Private Bag 0022, Gaborone, Botswana.

A discussion of the implementation of the tribal Grazing Land Policy (TGLP), which aimed to improve ranch management, increase productivity, preserve and more equitably distribute grazing lands, and to safeguard the interests of small farmers. Highlights achievements in the communal and commercial areas, including the provision of an adequate water supply, qualified ranch managers, enhanced small farmer participation and an increase in beef production. Identifies impediments to the implementation of the Policy and suggests a program for the development of the communal areas. Also makes recommendation regarding TGLP-related monitoring and evaluation. 83 pp.

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Schmidt, Guenter. Maize and Beans in Kenya: The Interaction and Effectiveness of the In-Formal and Formal Marketing Systems. Occasional Paper No. 31, 1979. Institute for Development Studies, University of Nairobi, P.O. Box 30197, Nairobi, Kenya.

The Kenyan government has been planning to relax the control of the national marketing board, but lacks sufficient information on the costs, benefits, and impact on prices and income distribution to proceed with confidence. This study was designed to provide part of that information by analyzing the operation and effectiveness of the marketing systems for maize and beans with special emphasis on the roles of the formal and informal sectors. Results of the analysis suggest that the present system of controls is not meeting its objective of facilitating efficient movement of agricultural surplus to regions of scarcity, but is, in fact, increasing marketing costs, especially for small-scale farmers. The author recommends relaxing the control of the marketing board, but maintaining it as a market stabilizer holding buffer stocks at floor and ceiling prices. 155 pp.

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Shute, J.C.M. Ghana-Guelph Bibliography. 1982. School of Agricultural Economics and Extension Education, Ontario Agricultural College, University of Guelph, Guelph, Ontario N1G 2W1, Canada.

A bibliographic listing of materials produced during the nine-year Ghana-Guelph Project (1970-1979) which linked the University of Ghana and the University of Guelph in an "institution building effort to enhance Ghana's capacity to address its food problems." Lists materials authored by Ghanians and Canadians in the areas of agricultural extension; animal science; crop science; home science; food and nutrition science; agricultural economics; veterinary medicine; and project administration and evaluation. Along with publications and presentations produced by graduate students and faculty, the Bibliography includes all thesis research done on the Project, as well as Project reports. 20 pp.

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Singh, Santokh. "Development of Hill and Tribal Areas." Kurukshetra. Vol. 27, No. 1, October 1978. Kurukshetra, Publication Division, Patiala House, New Delhi-11001, India.

Discusses various government measures taken to improve the living conditions of people in the hill and tribal areas of India. Suggests that dairy and poultry production, processing industries for agriculture, and horticultural crops can be suitable activities for small groups. Also stresses the need to establish systems that will ensure equitable prices for products, and that will effectively link processing and marketing facilities with the interior. pp. 16-20.

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"Small Farmers of Nepal Show the Way." Ideas and Action. No. 122, 1978/3. Food for Hunger Campaign/Action for Development, Food and Agriculture Organization of the United Nations (FAO) Via delle terme di Caracalla 00100, Rome, Italy.

Summarizes the Small Farmers Development Project which aims to organize poor farmers and landless laborers into effective groups. The project is based on the belief that the poor can make better use of available facilities and services if they are organized into groups. Shows how groups evolved from facilitating loans to promoting income-raising, educational, social, and political activities. Lists some problems faced by the groups and suggests why the project seems successful. pp. 14-20.

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Spencer, Dunstan S.C. Micro-Level Farm Management and Production Economics Research Among Traditional African Farmers: Lessons from Sierra Leone. African Rural Employment Study, Paper No. 3. 1972. Department of Agricultural Economics, Michigan State University, 202 Agriculture Hall, East Lansing, Michigan 48824, USA.

Accurate data is most essential for planning and for economic analysis. In this paper, the author shares valuable experiences in collecting data for planning purposes pertaining to small-scale rice-production farm management in Sierra Leone, West Africa. Spencer describes four methods of farm management and production economics research. These are: the model or case farm study; farm account books; the farm business survey; and the cost-route method. The first involves studying the daily activities of selected successful "progressive" farmers and urging other farmers to use them as models. This method has been successfully used in the USA and Kenya. The second involves checking records and farm account books compiled and kept by farmers as a source of data for farm management analyses. However, this method may not be practicable where farmers are not literate, as is the case in many developing countries. The third requires the administration of a questionnaire to selected farmers to find out their experiences, problems, and successes. Farm business surveys are a quick and relatively cheap method of collecting micro-level farm management data. The fourth, the cost-route method, involves interviewing farmers repeatedly for at least one crop season to record pertinent events and activities. This last method was used by the author successfully in a study of Sierra Leone rice production. Based upon his experiences, the author offers suggestions for minimizing costs incurred in the collection of relevant data. This is an important resource for project planners and managers, because frequently projects fail due to lack of knowledge of appropriate methods. 29 pp.

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Spencer, Dunstan S. C., Ibi I. May-Parker, and Frank S. Rose. Employment, Efficiency, and Income in the Rice Processing Industry of Sierra Leone. African Rural Economy Paper No. 15. 1976. Department of Agricultural Economics, Njala University College, University of Sierra Leone, Njala, Sierra Leone; or Department of Agricultural Economics, 202 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, USA.

Analysizes the rice processing industry of Sierra Leone in view of the fact that the growth rate of agriculture in that country is lagging behind that of other sectors, and in light of the failure of West Africa to produce enough rice for the self-sufficiency of which it is capable. Along with describing traditional and modern rice processing techniques, the authors present a methodology for analyzing the employment and income effects of policies designed to develop the rice processing industry, and make policy recommendations relating to investment in alternative rice processing techniques. 78 pp.

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Spring, Anita and Art Hansen. Women's Agricultural Work in Rural Zambia: From Valuation to Subordination. 1979. Available from the Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

A paper prepared for a panel discussion at the 1979 African Studies Association's annual meeting in Los Angeles. Sets out general hypotheses and conclusions from the literature on the economic impact of agricultural development on women. The researchers then examine the agricultural and economic changes that have occurred since the 1930's among the Luvate-speaking peoples of Zambia. Conclusions about the relative economic positions of men and women in the same rural community are compared to the general condition of women in agriculture. Questions as to whether either or both sexes have an improved living standard as a result of modern agricultural technology are also discussed. The authors conclude that agricultural development has led to an increase in the women's workload and their economic dependence on men, and that the negative attitudes of project planners and policy makers toward women's role in production serve to perpetuate this situation. 25 pp.

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Staudt, Kathleen A. Inequities in the Delivery of Services to a Female Farm Clientele: Some Implications for Policy. Discussion Paper No. 247. 1977. Institute for Development Studies, University of Nairobi, P.O. Box 30197, Nairobi, Kenya.

Reports on a study of 212 small-scale farm households in western Kenya, which shows that although women farm managers are as innovative and productive as men, they have less access to agricultural services, and that this bias increases as the value of services increases. Concludes that discrimination in government agricultural services needs to be removed to improve women's productivity and increase the general level of agricultural productivity. Policy recommendations regarding staff training, administrative cooperation with women's groups, and group training for women are included. 21 pp.

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Staudt, Kathleen. Women and Household Issues in Farming Systems Research. 1981. Available from the Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

Author explores the potential of a farming systems research approach to provide a more realistic assessment of women's participation in agriculture and food production activities. While noting the positive aspects of farming systems research, she cautions against incorporating the gender biases of other research perspectives, and suggests that increased attention should be focused on culturally defined gender roles and their influence on the delivery of agricultural extension services, particularly in contexts where women share primary farming responsibilities or are farm managers. 19 pp.

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Stavis, Benedict. Agricultural Extension for Small Farmers. Working Paper No. 3. 1979. MSU Rural Development Series, Department of Agricultural Economics, 202 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, USA.

A study of the potential contributions of agricultural extension systems to improving food production. The communication of integrated technical information is instrumental in increasing rural income and productivity of small farmers and others in Agricultural related fields. Extension issues examined include: manpower training, organization, evaluation techniques, relationships between extension and research functions, and the use of cooperatives and local control in managing programs. 81 pp.

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Swanson, Burton E. Organizing Agricultural Technology Transfer. The Effects of Alternative Arrangements. PASITAM Design Study. 1975. International Development Research Center, Indiana University, 1005 East 10th Street, Bloomington, Indiana 47401, USA.

Insuring that agricultural technology is appropriate to the developing countries rests, in part, on cooperative research efforts committed to finding practical solutions to agricultural problems. This paper discusses the use of international research centers to assist developing nations in organizing such institutions of their own. To illustrate the point, Swanson presents two papers, "Institution Building: The International Wheat Technology Development and Transfer System" and "Institution Building: Impact of the International Systems on National Capacity--The IRRI and CIMMYT Training Programs." The international research centers--the International Maize and Wheat Improvement Center (CIMMYT) in Mexico and the International Rice Research Institute (IRRI) in the Philippines--are assisting nations in developing their research capacities by offering usable organizational models and training strategies. 76 pp.

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Tadesse, Zenebeworke. Women and Technological Development in Agriculture: An Overview of the Problems in Developing Countries. Science and Technology Working Paper Series No. 9. 1979. United Nations Institute for Training and Research (UNITAR), 801 United Nations Plaza, New York, New York 10017, USA.

In this critical review, Tadesse argues that the impact of technological change on women in Third World countries has to be understood in the context of the particular social formation and the resultant division of labor between men and women. She analyzes issues related to women's participation in agriculture, plantations, food processing and storage, trade and commerce, and the formal labor market. She also discusses women's access to resources, including education and training, and points out that lack of training and education is both a serious cause and a consequence of women's exploitation in the production process. 38 pp.

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"Tanzania: Grain Storage at the Village Level." Ideas and [illegible] 120, 1978. Freedom from Hunger Campaign (FFHC)/Action for Development, Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Describes the process in which villagers, with minimal assistance from an outside development team, analyzed their problems with grain storage, devised solutions, and then modified existing structures or built new ones to meet their storage needs, using local designs, materials, and techniques. pp. 3-6.

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Tapiador, D.D., H.F. Henderson, N.N. Delmendo, and H. Tsutsui. Freshwater Fisheries and Aquaculture in China. FAO Fisheries Technical Paper No. 168. FIR/T168. 1977. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Describes the aquaculture and fishing practices of China and ways in which the Chinese experience can be used for the further development of inland fisheries and aquaculture in other FAO member countries. The report focuses on the integration of land, water, and fishery management as it relates to aquaculture. It also emphasizes the direct involvement of local people from the initial conception of a project to the final stages of implementation and evaluation. Perhaps the most striking feature of the Chinese experience is that this integration is practiced at the farm level by farmers who are the beneficiaries of the water projects. The authors further suggest strategies for land and water development that include major schemes aimed at water conservation and flood control, such as natural-lakes management, as well as construction of reservoirs and ponds, canals and creeks, fishponds, paddy fields, water-lifting devices, and fishways. Unusual aspects of the Chinese approach to lake and reservoir fisheries are discussed regarding stocking, fertilizing, large-scale catching, subdivision and bottom grading, and clearing. Development project planners and designers can acquire some useful ideas from this report, especially ideas pertaining to farmer participation. Also contains useful information about aquaculture for all fishermen. 84 pp.

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Tendler, Judith. Inter-country Evaluation of Small Farmer Organizations. Final Report. 1976. Bureau for Latin America, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

An evaluation report on some AID programs involving small farmer organizations in Ecuador and Honduras. Provides a score of recommendations for AID on issues such as the organization of small farmer groups and the design and development of AID programs. Identifies inadequacies in existing credit programs and suggests ways to improve them. Also highlights the benefits of smooth inter-agency coordination, identifies current coordination problems, and offers suggestions on how to improve the situation. 52 pp.

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Tinker, Irene. New Technologies for Food Chain Activities: The Imperative of Equity for Women. 1979. Office of Women in Development (PPC/WID), Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Focusing on rural poor women, Tinker discusses the effects of recent development policies and new technologies on women's participation in food-chain activities - namely, the production, processing, preservation and preparation of food, as well as household energy and water supply responsibilities. The author argues that the modernization process and resulting technological activities have largely ignored the needs of rural women as a group. Citing cases from Africa, Asia and Latin America, she maintains that while women often assume the bulk of responsibilities for food-chain activities in developing countries, modern technologies aimed mainly at men have made it harder rather than easier for women to grow or earn food because of restrictions placed on their traditional economic activities. Reasons for women's low-priority economic status can be traced to two prevailing biases in modern economic development theory: (1) continued perception of a dichotomy between modern and traditional economic activities, and (2) irrational occupational sex-role stereotyping. Because of their vital economic responsibilities, Tinker concludes by strongly advocating the active inclusion of rural women in all phases of the development process related to food-chain activities. 43 pp.

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Trikha, R.N., and R.W. Nave. SPRA's Activities on Soyabean Research, Extension, Processing, Utilization and Popularization. 1978. Soya Production and Research Association (SPRA), 182 Civil Lines, Bareilly, (U.P.), India.

The introduction of soyabeans to Indian agriculture in 1968 prompted the formation in 1972 of the Soya Production and Research Association. The Association's goal has been "to interlink soyabean research, crop extension, product processing, utilization and the marketing of both grains and soya food products." To meet this goal the Association has established five projects: Soyabean Production, Nutrition Education, Food Processing, Research and Development, and an Expansion Program. The Soyabean Production Project receives most of the attention in this publication which outlines the various crop demonstrations conducted and the field problems of soyabean growth. Also described are the extension literature, the Soyabean Technical Newsletter, the Advisory Service, training meetings, field days, crop completions, and marketing procedures. Nutritional research and education, and food processing also receive the Association's attention as it seeks to expand the production and use of the soyabean and its by-products. 40 pp.

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United Nations Development Program (UNDP). An Organizational Analysis of Agricultural Extension and Related Programmes in the People's Republic of Bangladesh: Report of a UNDP/DTCP Mission 12 to 19 September 1978. 1978. UNDP, Asia and Pacific Programme for Development Training and Communication Planning (DTCP), Bangkok, Thailand.

The growing concern among international agencies about strengthening the agricultural extension system in Bangladesh resulted in a UNDP/DTCP mission in 1978. The objective of this mission was "to collect and synthesize information on organizations that are directly or indirectly involved in the Bangladesh agricultural extension system." This document presents the findings of those involved in the mission. While no specific recommendations are made, the authors present an organizational analysis of that country's agricultural extension system and identify areas of concern which may require further investigation. Also contains a few analytical charts for reference. 32 pp.

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United Nations Economic Commission for Africa (UNECA). Workshop on Food Preservation and Storage. 1975. UNIPUB, 1180 Avenue of the Americas, New York, New York 10036, USA; or African Training and Research Centre for Women, UNECA, P.O. Box 3001, Addis Ababa, Ethiopia.

A report of a workshop jointly sponsored by the government of Tanzania, UNICEF, the United Nations Economic Commission for Africa, and Food and Agriculture Organization of the United Nations. Participants from different regions in Tanzania studied traditional food storage and preservation methods, causes of food spoilage, and principles of conservation. They also discussed food storage and preservation in relation to nutrition, and considered the relationship between food supplies, family size, health and welfare. Several practical projects were carried out during the workshop. For example, participants built an improved rat-protected grain store and a solar dryer using locally-available materials. Attention was given to food preservation as a small-scale industry and potential source of income for women. Finally, participants planned ways to share what they had learned with their own communities. 102 pp.

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Van Vegten, J.A. Man-made Vegetation Changes: An Example from Botswana's Savanna. Working Paper No. 40. 1981. National Institute of Development and Cultural Research (NIR), Documentation Unit, University of Botswana, Private Bag 0022, Gaborone, Botswana.

This paper explores how human use of the environment is causing vegetation changes in Eastern Botswana's Kgatleng District and how these changes have affected the African savanna's ecosystem. Noting that, while almost imperceptable to local populations, vegetation changes occur quite rapidly, the author explores how such changes can result in substantial loss of economically valuable vegetation biomass. Several large maps of the area are included. 81 pp.

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Weimer, Bernhard (ed.). A Policy for Rural Development: The Case of Botswana's National Policy on Tribal Grazing Land. Discussion Paper No. 6. 1977. National Institute for Research in Development and African Studies, Documentation Unit, University of Botswana, Private Bag 0022, Gaborone, Botswana.

Composed of four essays, this document refers to the results of the "Workshop on Rural Environment and Development Planning in Southern Africa," held at the University of Botswana in July 1976. Subjects included in the articles are: How the government of Botswana arrived at its current Tribal Grazing Land Policy; the necessity for, and methods of, public consultation regarding the Policy; a review of some of the more technical aspects of the Policy; and a summary of the views expressed at the Workshop. 58 pp.

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Westley, Sidney B. and Bruce F. Johnston (eds.). Proceedings of a Workshop on Farm Equipment Innovations for Agricultural Development and Rural Industrialisation. Occasional Paper No. 16. 1975. Institute for Development Studies, University of Nairobi, P.O. Box 30197, Nairobi, Kenya.

These proceedings focus on several points related to the needs of Kenya's small farmers. One is the use of inexpensive equipment and tools which would decrease labor requirements and allow greater control over the timing of preparation and planting in anticipation of maximum use of seasonal rainfall. Another point is that these tools should be specifically designed for local conditions, and should be locally made and locally repaired. Costs must be kept low because of the very limited cash incomes of the farm families which need them most. Still another is that on marginal to moderately productive land, ox-drawn equipment could be beneficially used to a much greater degree than at present. Oxen are traditionally kept on many of the farms, but their work capacity is underutilized. The oxen must graze, however, which may not be profitable on land highly productive for other uses. Where lands are appropriate for oxen, it will be necessary to train women to handle them--unless families find the new methods of farming profitable enough for the men, who traditionally handle the oxen, to be able to remain on the land. 238 pp.

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Cycle. "The White Revolution." n.d. Cycle Publications, P.O. Box 3923, Grand Central Station, New York, New York 10017, USA.

Presents a brief history of the formation of dairy cooperatives in India. Explores the economic and health related benefits of these associations, as well as the change which these cooperatives brought about in the life style of their participants. 12 pp.

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Whyte, William F. Participatory Approaches to Agricultural Research and Development: A State-of-the-Art Paper. 1981. Rural Development Committee, Center for International Studies, 170 Uris Hall, Cornell University, Ithaca, New York 14853, USA.

This paper addresses the problems of small-scale farmers who, under present circumstances, have only small plots, poor soil, limited water availability, and have not benefitted from the events of the "green revolution." The author reviews the lessons learned from past research and development efforts directed towards these farmers and describes the evolving new participatory agriculture stragegy. Emphasis is placed on participatory on-farm research and the attempts to incorporate the participatory research strategy into national research and development policy. 111 pp.

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Wilkie, Neil A. "Nutrition Considerations in Agriculture and Rural Development." Proceedings of the Agricultural Sector Symposia. 1980. The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, USA.

This paper stresses the need to incorporate food and nutrition issues into rural development and agricultural projects. Since decisions on land use and water supply, cropping, food storage, credit and marketing may aggravate or alleviate the problems of undernutrition, malnutrition and micro-nutrient deficiencies in developing countries, the author stresses the need for evaluation. The impact and nutritional relevance of ongoing and new projects would be assessed in six areas: increased food production and availability; improved post-harvest technology and storage; food processing, enrichment and quality control; improved food marketing and distribution; improved food preparation and utilization; and delivery of nutrition support services. The paper concludes with guidelines for planning food and nutrition strategies and integrating them into rural development and agricultural projects. pp. 549-562.

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Williamson, John. "Using Local Peoples' Participation in a Food for Work Program in Nepal." Rural Development Participation Review. Vol. 2., No. 3, Spring 1981. Rural Development Committee, 170 Uris Hall, Cornell University, Ithaca, New York 14853, USA.

Discusses the organization and implementation of a food for work program in two areas of Nepal. Food for work programs are often set-up quickly in response to a critical food shortage by outsiders with little input from potential participants. This program attributes its success to the participation of local people in the decision-making processes. The villagers selected an irrigation work project as a means of alleviating food shortages in the future. Each village operated its own portion of the project in its own way. While most villages completed their projects, a few suffered from corrupt leadership or poor participation. pp. 15-17.

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Wily, Liz. The TGLP and Hunter-Gatherers: A Case Study of Land Politics. Working Paper No. 33. 1981. National Institute of Development and Cultural Research (NIR), Documentation Unit, University of Botswana, Private Bag 0022, Gaborone, Botswana.

The Tribal Grazing Land Policy (TGLP), introduced in Botswana in 1975, established a policy of land enclosure to prevent overgrazing. Such a policy however, may have a devastating effect on the life style of the hunting-gathering people, the San or Bushmen, of the area. This paper traces some of the conflicts of interest that have arisen between the TGLP and the Bushman Development Programme which was established to aid the San in the development of self-reliance and integration with other aspects of Botswana society. The conflict between social justice and enclosure have led to the surfacing of many policy issues, such as whether the San are entitled land-rights despite their equal citizenship. 102 pp. (Also available from NIR, by Liz Wily is Official Policy Towards San (Bushmen) Hunter-Gatherers in Modern Botswana: 1966-1978. [Working Paper No. 23, 1979, 211 pp.] which documents the policies regarding the San since Botswana's independence in 1966.)

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Yu, Terry Y.H. Farm Family Income Distribution by Region in Taiwan. Discussion Paper Series No. 77-14, November, 1977. Council for Asian Manpower Studies, University of the Philippines, Diliman, Quezon City, Philippines.

An investigation of the relationship between the distribution of farm family income and agricultural regions in Taiwan. Finding that income distribution is more equal within than among agricultural regions, the author analyzes the reasons for this inter-regional inequity, and makes recommendations directed toward more equitable regional development. 37 pp.

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Zandstra, Hubert, Kenneth Swanberg, Carlos Zulberti and Berry Nestel. Caqueza: Living Rural Development. 1979. International Development Research Centre (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

A case study and evaluation of the Caqueza agricultural project in Colombia which promotes the active participation of small farmers in their own development. In addition to describing a flexible methodology for implementing rural development, the book examines the relationships between a local project and national development plans, and the roles of agricultural technicians who must link local priorities to the larger context. 321 pp. (Also available in Spanish.)

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4.0 AGRICULTURE AND ITS NATURAL ENVIRONMENT

Hens, J.G., H.W. Beall, and A. Cote. Trees, Food, and People: Land Management in the Tropics. 1977. International Development Research Center (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

While the tropical rainforests of the world constitute a potentially vast resource, they nonetheless remain one of the least understood ecosystems on earth. This monograph presents a detailed overview of the environmental importance of the tropical forest and the diverse range of natural raw materials it provides. The authors outline priority areas for research and discuss management practices and policies to guide the utilization of tropical forest resources in the future. 52 pp.

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Berry, Leonard, Richard Ford, and Richard Hosier. The Impact of Irrigation on Development: Issues for a Comprehensive Evaluation Study. AID Program Evaluation Discussion Paper No. 9. 1980. The Studies Division, Office of Evaluation, Bureau for Program and Policy Coordination, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Irrigation is recognized as having great potential for increasing agricultural productivity, yet many irrigation projects fail to achieve their stated goals because of the disruptive effects of irrigation technologies on the environment and socio-cultural systems. In order to incorporate these adverse effects in project evaluation, the author proposes that irrigation projects be examined not only in terms of their economic viability and efficiency, but also, their environmental and social impact. Some of the practical recommednations emerging from this study of AID experience in evaluating irrigation projects are that a monitoring and evaluation component for a small number of key variables for success be written into projects and that methods for incorporating evaluation results be specified in the design of future projects. 70 pp.

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Bhatty, K.M. Social Determinants of Water Management in Daudzai. 1979. Pakistan Academy for Rural Development, P.O. Box 362, Peshawar, Pakistan.

Based on the Pakistan Academy for Development's philosophy of development which emphasizes rural participation, this study was undertaken to establish determinants of water management decision-making in a semi-settled region of Pakistan. Water allocation among the villages in this area is specified by the Riwaj-i-Abpashi, a 19th Century system of customary law, which provides the overall decision-making framework for total water management. This research focused on the ways in which local water delivery systems are managed by the villagers as well as how the villagers perceive their principle water problems. Results of the analysis emphasize the important role of traditional authority in settling most water use disputes, but also suggest that the Riwaj-i-Abpashi needs to be updated, and that the major privately owned canals should be replaced by government-managed structures. 47 pp.

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Colfer, Carol J. Pierce. The Importance of Women to Agro-Forestry in Borneo. n.d. Available from the Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

As part of a government-sponsored resettlement program, a large segment of the Uma Jalan Kenyah population left their traditional homeland in the interior of Borneo to settle in the lowland community of Long Segar where they would have access to schools, health care, and agricultural resources. After settling in the new area, however, the villagers experienced a significant increase in malnutrition as a result of a shift from consuming a variety of forest grown foods to a dietary emphasis on rice. In this paper the author outlines the importance of forest foods to the health of the villagers and suggests that future development efforts focus on the production, use, and sale of forest foods by women. This would enable a return to a balanced diet without major changes in food habits since forest foods were traditionally part of the Uma Jalan Kenyah diet. In addition this would provide women with opportunities to participate in agricultural development activities, while giving recognition to the important roles women have in food production and collection. 4 pp. (Also by the same author is Women as Farmers in Agricultural Development, which stresses the need to consider the cultural context when undertaking projects involving the transfer of agro-technology. 2 pp.)

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Cooke, H.J. The Problems of Drought in Botswana. Working Paper No. 17, 1978. National Institute for Research in Development and African Studies, Documentation Unit, University of Botswana, Private Bag 0022, Gaborone, Botswana.

Examines the definition of drought as it can be applied in Botswana; why Botswana suffers from severe water shortages; and pro'lems related to the unpredictable, and therefore unprepared for, drought. Looks at the immediate and possible long term effects of droughts. Emphasizes that since droughts cannot be predicted, the nature of preparation must lie in contingency planning. 26 pp.

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English, H.E., and Anthony Scott (eds.) Renewable Resources in the Pacific: Proceedings of the 12th Pacific Trade and Development Conference, held in Vancouver, Canada, 7-11 September 1981. 1982. International Development Research Centre (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

Based on the assumption that industrialized and developing countries must work together to avoid serious depletion of natural resources, this document presents a series of conference case studies and discussions dealing with renewable food and energy resources in the countries of the Pacific region. Such topics as forestry, fisheries, and substitutes for fossil fuels are covered, as well as related policy issues. 293 pp.

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Food and Agriculture Organization of the United Nations (FAO). Report on the Expert Consultation on Training in Water Management Held in Rome, Italy, 21-24 September 1982. 1983. FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

A summary of the discussions of a group of specialists and administrators from developing countries, donor agencies, and international organizations brought together by the FAO to discuss training needs for water management programs. After describing their own efforts to provide training for professionals, technicians, farmers, and others working on irrigation projects, the group focused on general issues regarding training for water management. The group concluded that current training programs are, for the most part, inadequate, and that there is a critical need to increase training programs, both in quantity and quality, in order to meet present and anticipated long term manpower needs. Among other general recommendations, the group suggested that training should be interdisciplinary, addressing technical as well as social issues; that training programs should be designed to fit within a national policy of human resources development for irrigation management (in some cases, establishing such a national policy is a pre-requisite to planning an effective training program); and that international cooperation agencies are indispensable to efforts to improve the management of irrigation water and should be encouraged to increase the amount of financial and technical support allocated for training. 28 pp.

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Gellar, Sheldon. Planning, Management, and Participatory Development Issues on Irrigation Projects: A Select Annotated Bibliography. 1981. Organization for Economic Co-operation and Development (OECD), 2, rue Andre-Pascal, 75775 Paris, Cedex 16, France.

Prepared for the Club du Sahel and the Permanent Interstate Committee for Project Control in the Sahel (CILSS), this document provides a select annotated bibliography on planning, management, and participation in irrigation projects. The bibliography concentrates on sources written by social scientists who are aware of the need for a multidisciplinary approach in order to adequately address the political, social and economic impacts of irrigation projects. Case studies of Africa, the Middle East, Asia, Latin America, and the United States are listed, as are other bibliographies, journals, and periodicals. The materials in this bibliography are limited to those published in English. A forthcoming Club du Sahel bibliography will present sources written in French. 64 pp.

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Henderson, Francine I. and Johannes B. Opschoor. Botswana's Environment: An Annotated Bibliography. Working Bibliography No. 5. 1981. National Institute of Development and Cultural Research (NIR), University of Botswana, Private Bag 0022, Gaborone, Botswana.

Generally covering environmental potentials, impacts, and constraints as they relate to socio-economic development in Botswana, this bibliography focuses specifically on the socio-economic aspects of agricultural resource utilization for subsistence farming. Resource management is also extensively treated. Organized alphabetically by author or publisher, the bibliography also includes subject and regional indexes. 88 pp.

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Hoskins, Marilyn W. Women in Forestry for Local Community Development: A Programming Guide. 1979. Office of Women in Development (PPC/WID), Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Draws attention to how forestry development programs have ignored women, despite their expertise and traditional activities related to forestry and daily use of forestry products. Recommends that women be integrated in such programs and enumerates activities in which they might be involved. 58 pp.

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International Support Programme for Farm Water Management. Farmer's Participation and Organization for Irrigation Water Management. 1982. Land and Water Development Division, Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Technical deficiencies in the design and operation of irrigation systems can only partially explain the frequently poor results of water management projects. Neglect, on the part of planners, of the social dimensions of such projects and the potential impacts on local farming communities constitutes a major constraint in achieving and sustaining improved water use. Noting that farmers are rarely consulted on the development of irrigation systems, nor are they given adequate training and information on water management, this document points out that serious obstacles to farmer's participation can also be found within the farming community itself. Primary among these is the lack of an appropriate local organization that would encourage participation and facilitate long-term local management of an irrigation system. A discussion of the establishment, organization, and functions of local-level water-users associations is presented along with brief case examples of such participatory associations found in Sri Lanka, Indonesia, the Philippines, and Pakistan. 30 pp.

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Joyce, Stephen J. and Francoise Beudot. Elements de Bibliographie sur la Secheresse au Sahel. Organisation de Cooperation et de Developpement Economiques, Centre de Developpement, 94, rue Chardon-Lagache, 75016 Paris, France.

Begun in 1976, this annotated bibliography lists publications on the Sahel drought. Topics covered range from scientific research to social science issues on areas of agriculture, health, government, and industry. Updated editions are issued frequently. In French.

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Kamweti, David. Tree Planting in Africa South of the Sahara. 1982. The Environment Liaison Centre, P.O. Box 72461, Nairobi, Kenya.

A guide to planting trees and caring for seedlings in the southern portion of Africa. The author explains the importance of replanting forests, especially in areas where they are being constantly depleted as a fuel source. Outlining the various steps in tree planting, the author explores factors such as climate, soil type, ecological zones, and species adaptability, that must be taken into consideration when planting trees. Noting that the seedlings must be given adequate care to allow for proper growth and for protection from excessive heat, loss of water, disease, and pests, advice is also given on how to look after young seedlings, whether they are in a seed nursery or on a field plantation. 75 pp.

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Kenya, Ministry of Agriculture, University of Nairobi, and Egerton College. Soil and Water Conservation in Kenya: Report of a Workshop held at the University of Nairobi, 21-23 September 1977. Occasional Paper No. 27. 1978. Institute for Development Studies, University of Nairobi, P.O. Box 30197, Nairobi, Kenya.

A collection of workshop papers covering such topics as "Cropping Systems for Soil Conservation in Nyanza Province", and "Problems of Soil and Water Conservation within the Upper tana Catchment." In addition, this document includes an outline of the workshop and descriptions of two field trips taken to Machakos and Murang'a District. Recommendations made by workshop participants are included which touch on areas such as national conservation policy and research and training. 161 pp.

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Lessard, Gilles and Amy Chouinard (eds.). Bamboo Research in Asia. 1980. International Development Research Centre (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

Noting the importance of bamboo in the daily lives of rural people, this document presents the proceedings of a 1980 workshop held in Singapore to discuss bamboo research in Asia. Along with a general statement addressing research needs and priorities, this publication also includes individual country reports, as well as a collection of papers covering the types of bamboos, range of uses, and methods of cultivation. 228 pp.

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Levine, Gilbert and Henry C. Hart. Mobilizing Local Resources for Irrigation. Report No. 22. 1981. Agricultural Development Council (ADC), 1290 Avenue of the Americas, New York, New York 10104, USA.

An interpretive summary of a seminar under the same title which brought together a number of specialists in Asian irrigation and water management for the purpose of sharing ideas and experiences. Along with excerpts from the keynote address, which focused on the need for more farmer participation in water resources program planning and implementation, this report provides abstracts of the four thematic papers used to initiate discussions. The discussions dealt with capturing the economic surplus generated by irrigation projects, increasing voluntary farmer participation, understanding the nature of government investment in water resources development, and recognizing the impact of problems associated with central system management. Brief descriptions of participants' comments and conclusions are also included. 13 pp.

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National Research Council. Sowing Forests from the Air. 1981. Commission on International Relations, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418, USA.

Outlines the methods, equipment, and benefits of reforestation through aerial seeding. The authors explain that in the many areas of the world experiencing rapid deforestation, aerial seeding can prove an efficient, quick, and inexpensive method of replanting the land. The authors point out that such a method would enable land to be reseeded that otherwise may not be replanted for many years, thus helping to eliminate unnecessary erosion, destructive flooding, and unused land. The authors stress the fact that aerial seeding is not meant to replace reforestation with nursery grown seedlings, but rather to supplement the other available methods, particularly where aerial seeding would be more efficient and economical. The remaining sections of the document describe the experiences of aerial seed planting in the United States, Canada, Australia, New Zealand, and countries in the tropics. 61 pp.

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Prescott-Allen, Robert and Christine Prescott-Allen. What's Wildlife Worth? Economic Contributions of Wild Plants and Animals to Developing Countries. 1982. Earthscan, 10 Percy Street, London W1P ODR, England, UK.

The authors detail the range and multiple contributions of wildlife to the lives and economies of people in Third World countries. From food to fuel, from furs to fibers, wildlife resources provide for a variety of needs. Traditional herbal medicine, genetic research, ecological equilibrium of the whole planet, all depend on a bountiful and varied wildlife. Authors conclude that since both the North and the South have such high stakes in Third World wildlife, they should value it more highly and work collaboratively to conserve and develop it.

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Sander, William. The Impact of Two Communal Irrigation Projects in the Philippines. Discussion Paper 7917. 1979. Institute of Economic Development and Research, School of Economics, University of the Philippines, Diliman, Quezon City, Philippines.

Analyzes the economic impact of two communal irrigation systems in the Philippines. Both projects met at least some of the criteria for appropriate technology in that their construction was labor-intensive, utilized primarily local labor and materials, and could be maintained and used by the local people. Moreover, by providing the opportunity to grow at least two crops of rice per year, rather than one, they also provided employment in the local area. However, the benefits of the project were not equally available to all community members. For instance, land tenure and access to credit affected the returns to individual farmers. 23 pp.

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Tillman, Gus. Environmentally Sound Small-Scale Water Projects: Guidelines for Planning. 1981. Volunteers in Technical Assistance (VITA), 1815 N. Lynn Street, Suite 200, Arlington, Virginia 22209, USA.

Jointly published by Coordination in Development (CODEL) and VITA, this second volume of the Guidelines for Planning Series introduces several issues of interest to persons who plan and implement small-scale water projects. It reviews basic ecological principles; describes water-related diseases in some detail; considers ways to improve community water supply and sanitation; and discusses the role of water in agriculture. A final chapter gives step-by-step guidelines for project planning. 142 pp.

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Tillman, Robert E. Environmental Guidelines for Irrigation. 1981. Office of Forestry, Environment and Natural Resources, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Stressing the importance of integrating socio-economic factors with environmental considerations, these guidelines provide a systematic assessment of potential impacts of irrigation projects for those concerned with their planning, implementation, operation, and maintenance. Following an overview of irrigated agriculture and a discussion of the benefits of irrigation, the author analyzes environmental problems associated with irrigated agriculture. Along with the impacts on soil, water resources, flora, and fauna, a detailed review is also presented on the socio-economic and health impacts. The appendix contains a useful checklist of environmental data for planning and evaluating irrigation projects. 74 pp.

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Volunteers in Technical Assistance (VITA). Environmentally Sound Small Scale Agricultural Projects: Guidelines for Planning. 1979. VITA, 1815 N. Lynn Street, Suite 200, Arlington, Virginia 22209, USA.

This is a first in a series of Planning Guidelines, produced by Volunteers in Technical Assistance (VITA). With admirable clarity it explains the dynamics of an ecosystem--a complex of living organisms interacting with one another as well as non-living substances. When agriculture impinges on an ecosystem, positive or negative reactions take place; the knowledge of these is essential to farmers and agricultural planners. The booklet contains guidelines on water, soil, nutrient, and pest management. There are suggestions on how farmers could solve such problems as erosion, preparation of manure, and pest control by using simple methods that rely on local labor and materials. Also available in Spanish. 103 pp. (Also available from VITA as part of the Planning Guidelines series is Environmentally Sound Small-Scale Forestry Projects, by Peter F. Folliott and John L. Thames. 1983, 109 pp.)

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Zerbe, J., J. Whitmore, H. Wahlgren, J. Laundrie, and K. Christophersen. Forestry Activities and Deforestation Problems in Developing Countries. PASA No. AG/TAB-1081-10-78. 1980. United State Department of Agriculture (USDA), Forest Service, Forest Products Laboratory, Washington, D.C. 20250, USA.

A report describing forestry problems and projects in developing countries, which assesses ecological impacts of forestry activities and outlines constraints faced in implementing projects. Detailed studies from seventeen developing countries form the core of the document, and provide a basis for a worldwide analysis of the problems. The authors find that some projects are contributing to deforestation; that forestry projects are often imposed on communities, disregarding local needs and paying little attention to local involvement; and that, for the most part, the projects do not encourage agroforestry or energy farms to produce fuelwood. They contend that action programs, rather than further research, are needed. A list of twenty recommendations includes coordinating the forestry activities of national and international agencies and organizations, formulating detailed forestry and land use plans, conducting action programs, providing incentives for local involvement, developing means for combating fuelwood shortages, and strenghtening extension and education programs for local residents. 194 pp.

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5.0 NEWSLETTERS AND PERIODICALS

About AVRDC. Asian Vegetable Research and Development Centre (AVRDC), Office of Information Services, P.O. Box 42, Shanhua, Tainan 741 Taiwan, Republic of China.

Reports on current research in the Centre, devoted to the improvement of vegetable crops. Also highlights symposia and workshops that involve the Centre.

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Action. "Scouting and Food Production." No. 4, July 1982. Community Development Services, World Scout Bureau, C.P. 78, 1211 Geneva 4, Switzerland.

Focuses on Scout involvement in hunger issues, nutrition education, and poultry, fish, and vegetable production. Emphasizes the active role of Scouts in development by means of personal education, participation in development projects, and cooperation between Scout groups of Europe and Africa. Sets of slides and booklets on Scouting and food production are offered in English or French. 12 pp.

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A D C Newsletter. Agricultural Development Council, Inc. (ADC), 1290 Avenue of the Americas, New York, New York 10019, USA.

Provides news of the Council. Training and research announcements and recent publications are also reported.

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Agripromo: Pour la Promotion du Monde Rural. Institut Africain pour le Developpement Economique et Social (INADES)-FORMATION, 08 Boite Postal 8, Abidjan 08, Ivory Coast.

Quarterly publication for fieldworkers and others involved in rural development in Africa. Recent issues have covered such topics as small animal raising (No. 23), cash and food crops (No. 24), rural children (No. 25), cooperatives and credit unions (No. 26), and women and work (No. 27). Designed to be both informative and practical, the journal includes interviews, case studies, articles which raise important issues, guidelines and instructions for activities and projects, and letters from readers through which ideas and experiences are shared. In French.

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AID Resources Report. Room 570, PP. SA-14, Office of Development Information and Utilization, Bureau for Development Support, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

Describes new information resources about development topics such as agriculture, housing, and appropriate technology.

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Approach. International Agricultural Center (IAC), Lawickse Allee 11, Wageningen, Netherlands.

Provides project descriptions and examines issues related to small farmer development. Extensive bibliography is also included.

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Approtech. "Food: Production, Processing and Distribution." Vol. 4, Nos. 3 and 4, September-December 1981. International Association for the Advancement of Appropriate Technology for Developing Countries, University of Michigan, 603 E. Madison, Ann Arbor, Michigan 48109, USA.

A collection of articles covering a range of food-related topics and issues, for example: the economic and political forces contributing to deteriorating nutritional standards; food systems and the effects of chemicals, pollution, and soil damage on food quality; and the dangers related to the rapid disappearance of genetically diverse seed varieties. 71 pp.

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Bangladesh Journal of Agriculture. Bangladesh Agricultural Research Council (BARC), 130-C, Dhanmondi Residential Area, Road No. 1, Dacca-5, Bangladesh.

A scholarly journal for the advancement of the agricultural sciences.

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Basics. Rural Communications Services, 17, St. James' Street, South Petherton, Somerset, England, UK.

Directed to rural development workers. Aims to provide information on development problems in an easily understood form. Presents how-to and issue oriented information about: agriculture and food, health, housing, education, and training. Six issues a year.

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Benson Institute. Benson Institute, 500 East 800 North, Brigham Young University, Provo, Utah 84602, USA.

A quarterly periodocal which highlithts the research in agriculture and nutrition conducted by the Institute. Covers such topics as small-scale agriculture, home canning, nutrition information, and small animal care as applicable in both developed and developing countries.

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BIFAD Briefs. Editor, BIFAD Briefs, Room 2246 NS, Washington, D.C. 20523, USA.

Newsletter of the Board of International Food and Agricultural Development (BIFAD). Reports on activities, projects, seminars and research opportunities sponsored by BIFAD.

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Bulletin. "Agriculture, the Peasantry and Socialist Development." Vol. 13, No. 4, September 1982. IDS Publications, Institute of Development Studies (IDS), University of Sussex, Brighton BN1 9RE, England, UK.

This special issue explores aspects of, and approaches to, agricultural development in several socialist countries. In "Socialist Transformation of Agriculture and Gender Relations: The Vietnamese Case" [pp. 44-51], Christine Pelzer White illustrates the importance of the sexual division of labor for understanding socialist transformation of agriculture. David A. Dyker, "Soviet Agriculture Since Khrushchev-Decentralisation and Irrigisme" [pp. 29-35], explores the "efforts of the Soviet Government to redress the balance of developmental policies which favoured industry at the expense of agriculture." Also includes articles focusing on China, Cuba, Tanzania, and Ethiopia.

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Bulletin. Reading Rural Development Communications, University of Reading Agricultural Extension and Rural Development Center, London Road, Reading, RG1 5AQ England, UK.

This excellent periodical presents ideas, case studies and some practical materials of particular interest to those concerned with agricultural and rural development. Included in the wide range of topics the Bulletin discusses are appropriate technology, agricultural development and the rural poor, adult literacy and numeracy, and the role of media communication in agricultural extension education for rural development. The substantive critical analyses provided in this newsletter are of value to all involved in development activities.

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CAB News. Commonwealth Agricultural Bureaux (CAB), Farnham House, Farnham Royal, Slough SL2 3BN, UK.

A quarterly publication focusing on agriculture and resource control and cultivation throughout the world. Accompanies and supplements CAB main abstract journals. Also contains news of interest to users of CAB information services.

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Centerpoint. Asian Vegetable Research and Development Center (AVRDC), P.O. Box 42, Shanhua, Tainan 741, Taiwan, Republic of China.

A news magazine, published three times a year, aiming to share information on the research, projects, and accomplishments of the AVRDC. Some of the work highlighted in recent issues include research on soy beans, mung beans, and tomatoes; a home garden experiment to combat malnutrition; a study of western pesticides; and a survey of rural technologies in Taiwan.

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Ceres. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Provides thought provoking articles on themes related to development and agriculture with thorough discussions of problems and solutions. Also includes relevant interviews, related world news, and reviews of important documents. Six issues a year.

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The Christian Science Monitor. "The Challenge of Hunger." January 12, 1978. The Christian Science Publishing Society, 1 Norway Street, Boston, Massachusetts 02115, USA.

This special section contains numerous articles addressing issues surrounding world hunger. Some of the authors analyze global food issues in terms of political, economic, cultural and environmental constraints. Of these, some are optimistic about feeding the world's population; others are not. Still other articles examine fish farming, action plans for cereal production and distribution, and food production and consumption in Bangladesh, Mali, Taiwan, Sri Lanka, Mexico, and India. 16 pp.

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CIMMYT Today. International Maize and Wheat Improvement Center (CIMMYT), Apartado Postal 6-641, Londres 40, Mexico 6, D.F., Mexico.

Publishes information on the Centers' crop research with maize and wheat.

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CIRDAP Newsletter. Center on Integrated Rural Development for Asia and the Pacific (CIRDAP), Kothbari, Comilla, Bangladesh.

Focuses on rural development and farming in the Asia and Pacific region. Each issue contains an update on organizational activities of CIRDAP, along with brief reports on the work of member countries in the IRD (Integrated Rural Development) network. Attention is also given to the efforts of CIRDAP in providing information assistance to the regional network. Quarterly.

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Culture and Agriculture. Department of Anthropology, University of California, Davis, California 95616, USA.

Articles focus on the interrelationships between food production and culture from an anthropological perspective.

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Development Forum. Development Forum General Edition, DESI, C-527, United Nations, 1211 Geneva, Switzerland.

A newspaper issued ten times a year by United Nations University. Reports on a wide range of development topics and concerns throughout the world. Two recent issues are of particular interest. Volume 9, Number 3, April 1981 contains "Brains for More Bread" by Fred Sai [pp 6.] in which the author notes that a major obstacle to alleviating hunger and malnutrition in Africa is the great deficiency in personnel trained in nutrition and food sciences. Volume 10, Number 8, October 1981 contains a section devoted to world hunger. "World Hunger: Ethics and the Right to Eat" by Norman J. Faramelli [pp. 8-9] explores the increasing complexity of world hunger problems. The author summarizes several ethical theories that have been used to support proposed solutions to world hunger and provides a detailed discussion of the implications of including the "right to eat" among basic human rights. This issue also includes a number of shorter articles on a variety of topics related to nutrition and hu

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Ecoforum. Environment Liaison Center, Atlas House, Moi/Haille Selassie Avenue, P.O. Box 72461, Nairobi, Kenya, East Africa

Ecoforum provides a forum for Non-governmental Organizations from around the world to share information and ideas on environmental issues and plan strategies for solving environmental problems. It contains articles on a wide range of environmental issues and topics. In English, French, and Spanish. Monthly.

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Educational Broadcasting International: A Journal of the British Council. V[illegible] 13, No. 2, June 1980. British Council, Tavistock House South, Tavistock Square, London WC1H 9LL, England, UK.

Two articles in the section on agriculture and rural communication are of particular interest. "Agricultural Communication in Northern Ghana: Super-8 Films and Slides" provides technical information on the production of Super-8 films for agricultural extension programs and describes a project in which bullock farming was introduced to farmers through both media communication and face-to-face interaction with extension agents. The author stresses the importance of ongoing evaluation of media productions [pp. 65-69]. "Multimedia Support for Agricultural Development Programmes: MASAGANA 99" describes the extensive use of media to support the MASAGANA 99 Rice Production Programme in the Philippines [pp. 74-77].

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Food and Nutrition. Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

A bi-annual review of international developments in food policy and nutrition. Includes essays on nutritional status, food preservation and quality control, and nutrition planning; book reviews; and news on food laws and regulations in different countries. (Also available in French and Spanish.)

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Horizons. Publications Division, Office of Public Affairs, Agency for International Development (AID), Department of State, Washington, D.C. 20523, USA.

A new monthly magazine for development professionals. Each issue highlights various AID project activities, as well as presenting informative articles written by persons involved in a wide range of areas of international development.

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Hunger Notes. World Hunger Education Service, 2035 P Street, N.W., Washington, D.C. 20036, USA.

This publication aims to "facilitate the exchange of information and insights on world food and development issues." Each issue of this newsletter includes articles, excerpts, and a list of resources on a theme related to hunger and development. A section entitled "Network News" includes information on projects, conferences, and organizations. Of special interest is a recent issue entitled "Women and the Problem of Hunger" (Vol. 7, No. 8, January 1982, 12 pp.), which explores women's roles in food production and consumption.

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IADS Newsletter. International Agricultural Development Service (IADS), 1133 Avenue of the Americas, New York, New York 10036, USA.

Describes the activities and projects conducted by IADS. Also reviews new books relating to agriculture, and various innovative agricultural techniques.

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IDRC Reports. "Dossier: Food." Vol. 6, No. 2, 1977. International Development Research Centre (IDRC), Box 8500, Ottawa, Ontario K1G 3H9, Canada.

A dossier on questions related to the global food situation, with several articles of interest. In "Time for a Fair Deal for Farmers", W. David Hopper discusses the need for economic incentives for farmers in order to increase food production. Bob Stanley describes the network of international agricultural research centers which, through research and training, seeks to transform agriculture in the tropics for the improvement of the lives of subsistence farmers. In "Fishing for Development", J.H. Hulse describes the effort by the Central Inland Fisheries Research Institute to promote fish culture by farmers in India. pp. 9-16. (This periodical is available in Spanish as El CIID Informa, from Apartado Aereo 53016, Bogota D.E., Colombia; and in French as Le CRDI Explore from B.P. 11007, Dakar, C.D. Annexe, Senegal.)

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IFDC Reports. International Fertilizer Development Center (IFDC), P.O. Box 2040, Muscle Shoals, Alabama 35660, USA.

Provides technical information and discusses broader issues related to fertilizer. Reports on developments in many countries.

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Information: World Food Day, 16 October. World Food Day (WFD) Secretariat, Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

An occasional newsletter for WFD organizers to exchange news and ideas.

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International Newsletter. Institute of International Agriculture, College of Agriculture and Natural Resources, 101 Agriculture Hall, Michigan State University (MSU), East Lansing, Michigan 48824, USA.

A quarterly newsletter which describes the international activities of MSU's College of Agriculture and Natural Resources personnel. Recent issues have included news on the expansion of the international focus of the Department of Horticulture [Vol. 4, No. 2, Winter 1983] and a maize improvement project in Venezuela [Vol. 3, No. 2, Winter 1982].

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IWTC Newsletter. International Women's Tribune Center (IWTC), Inc., 305 East 46th Street, New York, New York 10017, USA.

Recent issues of this periodical have dealt with food and nutrition-related concerns. Of particular interest is a special issue summarizing the role of women in the food production chain [No. 10, August 1979, 32 pp.]. Articles comment briefly on women's need for access to land, technology, and capital to promote their full participation in agriculture and food production. This issue also presents various projects in Asia, Africa and Latin America designed to further such participation. It includes a resource list of organizations, materials and periodicals about women in agriculture.

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Kurukshetra. Krishi Bhavan, New Delhi 110 001, India.

This journal, devoted to rural development in India, often contains articles pertaining to agriculture on such topics as farm implements and new technologies, agricultural planning and finances, and foodgrain storage. For example, "Institutional Dimensions in Agricultural Planning" by P.C. Joshi [Vol. 30, No. 12, 1982, pp. 4-10] explores the relationship between agriculture and industry, underlining their interdependence. Another article, "Land Reforms: Implications for Productivity" by P. Krishna Mohan and L.K. Mohana Rao [Vol. 30, No. 14, 1982, pp.4-6] examines the impact of land reform measures taken in India since Independence, and concludes that such measures have resulted in high productivity and the use of more labor, though much land reform is still needed. 2 issues per month.

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Land and Water. Technical Newsletter of the Land and Water Development Division, Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy.

Directed to fieldworkers in land and water development, this newsletter provides information on a wide range of topics relevant to their work.

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L.I.F.E. Newsletter. League for International Food Education (L.I.F.E.), 1126 16th Street, N.W., Washington, D.C. 20036, USA.

A monthly publication providing a network for disseminating information on food and nutrition to developing countries. Deals with specific technical projects where L.I.F.E. volunteer experts are involved.

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Marga Quarterly Journal. "Food." Vol. 6, No. 4, 1982. Marga Institute, P.O. Box 601, Colombo, Sri Lanka.

A special issue on food supply and consumption in Sri Lanka. Topics covered include a comparison of the supply of food requirements in 1970 to that of 1979; patterns of food consumption; the production of animal proteins and how they are used in the Sri Lankan's diet; malnutrition among pre-schoolers; and prospects for the future. Also contains a selected bibliography on "Food Consumption and Nutritional Status in Sri Lanka", and statistics on food production, consumption and imports. 108 pp.

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New Internationalist. Montagu House, High Street, Huntingdon, Cambridgeshire PE18 6EP, England, UK; or 113 Atlantic Avenue, Brooklyn, New York 11201, USA.

A monthly magazine which frequently focuses on topics related to food and agriculture. "Feast, Famine and Farming", [No. 108, February 1982, 32 pp.], looks at the rise of multi-national agribusinesses and finds that growing corporate control over food production has done little to erradicate world hunger. Articles explore some of the results of this control: corporate ownership and patenting of seeds is dangerously narrowing the genetic base of food crops; large companies in countries like Honduras, Senegal, and the Philippines have thrived on land expropriated from small farmers; and pesticides are contaminating food crops and causing serious health problems for agricultural workers.

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News of Co-operative Development. Agricultural Co-operative Development International, 1012 Fourteenth Street, N.W., Suite 201, Washington, D.C. 20005, USA.

Reports on in-house organizational activities and describes projects being carried out by the organization.

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News Letter. Librarian, Bangladesh Agricultural Research Council (BARC), 130-C, Dhanmondi Residential Area, Road No. 1, Dacca 5, Bangladesh.

Reports on current agricultural problems and related research in Bangladesh. International agricultural research organizations are also listed.

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The NFE Exchange, Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

Published three times a year, this periodical provides pertinent information on selected themes relating to non-formal education and development worldwide. A variety of themes are covered. Some issues have a sectoral focus, others deal with particular conceptual or methodological issues in non-formal education, while others cover concerns relating to specific target audiences. Each issue includes an introductory article, brief descriptions of NFE projects, and a selected annotated bibliography, all related to the selected theme, as well as reviews of current literature on a related topic, and news items contributed to the NFE Information Center. Of particular interest are, "Education and Agriculture" [No. 19, 1980], which looks at issues concerning agriculture in world development; "Women and Production" [No. 22, 1981], which highlights trends in, and implications of, women's participation in national development and production; and "Linking Formal and Non-Formal Education" [No. 23, 1982], which explores ways in which linkages can help put into practice changing concepts of education and development.

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The NFE/WID Exchange-Asia. NFE/WID Information Exchange Center for Asia, Department of Agriculture, University of the Philippines at Los Banos, College, Laguna 3720, The Philippines.

A quarterly publication addressing topics related to non-formal education and the participation of women in rural development throughout Asia. Along with substantive articles and project reports each issue contains practical information on how to involve women more directly in rural development projects. Of particular interest are several recent issues which highlight regional NFE/WID activities and focus on the value of networking as a means of sharing information and experiences.

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Nutrition Planning. Nutrition Planning Information, P.O. Box 8080, Ann Arbor, Michigan 48107, USA.

An international quarterly journal of "abstracts about food and nutrition policy, planning and programs." Some of the topics covered include consequences of malnutrition, nutrition education, public health, and curative measures; food processing, distribution and feeding programs; and agriculture.

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Region. Fundacion para Desarrollo de la Region Centro Occidental de Venezuela (FUDECO), Apartado 254, Av. Libertador, Barquisimeto, Venezuela.

Announces development related news in Latin America. Describes FUDECO's studies and consulting activities carried out in various fields, including agriculture, livestock and forestry.

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Rural Development Abstracts (RDA). Central Sales, Commonwealth Agricultural Bureaux (CAB), Farnham House, Farnham Royal, Slough SL2 3BN, England, UK.

One of the CAB quarterly journals, RDA coverage includes rural development theory, policy and planning; physical resources; human resources; economic utilization of resources; public services; and projects and surveys. There is a current author, subject and geographical indexing of all abstracts.

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Rural Extension, Education, and Training Abstracts (RETTA). Central Sales, Commonwealth Agricultural Bureaux (CAB), Farnham House, Farnham Royal, Slough SL2 3BN, England, UK.

Issued quarterly, REETA abstracts general and professional publications from all over the world, covering theory, policy and planning, administration, manpower planning, formal and non-formal education, teaching materials, curriculum development, research and extension, methods, and case studies. Includes an author, subject and geographical indexing.

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Rural Life. The Institute of Rural Life at Home and Overseas, 27 Northumberland Road, Barnet, Herts, England, UK.

Through descriptive articles, provides information on diverse aspects on rural life and provides exchange of information between Great Britian and other countries on innovations and activities in such areas as change, agriculture, community development, primary health care, and ecology. Quarterly.

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Rural Progress. United Nations Economic Commission for Africa (UNECA), P.O. Box 3001, Addis Ababa, Ethiopia.

Created to share information on UNECA activities to promote rural progress, the newsletter is directed toward fieldworkers and international voluntary agencies in areas such as rural development, agriculture, veterinary medicine, and health. (Replaces African Women and Rural Development Newsletter.) Quarterly.

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SEARCA Diary. Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA). University of the Philippines at Los Banos, Laguna 3720, Philippines.

A monthly publication on agriculture in Southeast Asia. Includes articles on SEARCA-sponsored research and development projects, seminar and conference reports, and news items.

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SENELA. Extension Aids Unit of the Ministry of Agriculture and Natural Resources, Yundum, The Gambia.

A practical newsletter for Gambian fieldworkers. Includes essays on current issues in rural development and agriculture in Gambia, and reports from government departments involved in development. Regular features are "Development Dialogue," which presents a question-and-answer session with a leader involved in development, and "Ideas that Work," which presents practical suggestions. For example, recent issues featured grain storage (No. 15, 1980), and wood-burning stoves (No. 16, 1980).

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A Shift in the Wind. The Hunger Project, 2015 Steiner Street, San Francisco, California 94115, USA.

An occasional newspaper published by The Hunger Project, an organization aiming to erradicate hunger in this century, in part through a strategy of mass education of people in the developing world. The papers emphasize that there are more than enough food producing resources in the world to end hunger and provide nutritionally sound diets for every human being. What prevents this from happening is a lack of political and personal will on the part of the citizens and governments of developed countries.

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SINENFAL. Servicio de Intercambio de Informacion en Educacion No Formal y Mujer para America Latina (SINENFAL), Apartado Aereo 53372, Bogota, D.E., Colombia.

SINENFAL is the bulletin of the Information Exchange Service for Non-Formal Education Programs in Latin America. This periodical, which contains excellent articles and detailed descriptions of materials and organizations, serves as a forum for planners and practitioners to share ideas and experiences in the areas of non-formal education and women in development.

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Training for Agriculture and Rural Development. Food and Agriculture Organization of the United Nations (FAO), via delle Terme di Caracalla, 00100 Rome, Italy.

Reviews current opinions and experiences in agricultural education and extension. Articles examine cross section of projects and analyze their contributions to rural development. Annual.

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UNICEF News. "Food and Nutrition: The Most Basic Need of All." Issue 113, No. 3, 1982. UNICEF, Information Division, Palais des Nations, CH 1211, Geneva 10, Switzerland.

A special issue focusing on undernutrition and food production in developing countries. Articles discuss the paradox between food availability and food maldistribution, the disappointing failures of nutrition programs, and the effects of hunger on child growth and development. In a more optimistic vein, other articles describe successful efforts in various countries, including fish farming in Central African Republic and a community nutrition--Ilaw ng Buhay--movement in the Philippines. 35 pp.

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The Urban Edge. "More Food for the Urban Poor." Vol. 4, No. 6, July 1980. Council for International Urban Liason, 818 18th Street, N.W., Washington, D.C. 20006, USA.

Maintaining that undernourishment is partly a result of a lack of enough food in developing countries, articles discuss issues such as designing food programs, food hygiene, food policies, feeding programs for young children, and nutrition assistance by CARE, the World Bank, USAID, and the World Food Program. p. 6.

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Voluntary Action. Vol. 24, No. 3, October 1981. Association of Voluntary Agencies for Rural Development (AVARD), 5 Deen Dayal Upadhyaya Marg, New Delhi 110002, India.

This issue deals especially with feeding the population of India. In "Conservation for Survival of Agriculture" B.V. Nimbkar contends that India could feed its population with less than the amount of land presently under cultivation. Good management and improved agricultural practices would allow the remaining land to be put into a land bank, including critical virgin forests, to provide the organisms which may be necessary to feed future generations. In "Feeding the World" the Food and Agriculture Organization (FAO) gives an overview of world hunger, food supplies and distribution, and discusses projected systems and costs for feeding the world's population in the future. Content of other articles ranges from a case study of motivating children to plant and care for their own fruit trees, to maximizing food production in India by keeping goats. Different systems of rainwater control for lands ordinarily unusable due to waterlogging during the rainy season are also discussed. 31 pp.

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Watermark. United Nations Development Programe, (UNDP), 1750 New York Avenue, Washington, D.C. 20006, USA.

Contains newsbriefs of activities which are supportive of the United Nations Water Decade project. Announces dates and places of various international meetings. Bi-monthly.

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Winrock International Focus. Vol. 1, No. 1, January 1983. Winrock International, Petit Jean Mountain, Morrilton, Arkansas 72110-9537, USA.

The articles in this issue focus on various aspects of agriculture. One article, "Agroforestry", defines the term as the science of combining agriculture, either the raising of crops or the grazing of livestock, and forestry on the same piece of land. Winrock's interest in agroforestry is explained as well as why the experiences in agroforestry of the southern U.S. are "relevant to international concerns about agriculture production and resource use." A second article, "Focus on China", outlines a Winrock study undertaken to determine "provincial needs with respect to development of dual-purpose cattle and goats" in the Sichuan Province of China. 8 pp.

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The Women and Food Information Network Newsletter. The Women and Food Information Network, 24 Peabody Terrace #1403, Cambridge, Massachusetts 02138, USA.

A bi-monthly publication containing descriptions of training programs, project activities, research, and publications; announcements of conferences and job opportunities; and short articles. All relate to the general theme of women, food, and international development.

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World Food Programme News. World Food Program (WFP), Via delle Terme di Caracalla, 00100 Rome, Italy.

Publishes reports and news about WFP activities and WFP funded projects. Available in English, Arabic, French, and Spanish. Quarterly.

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World Forest Action Newsletter. World Forest Action, P.O. Box 184, London WCL, England, UK.

This newsletter explores the issues surrounding deforestation, particularly the rapid destruction of tropical rainforests and how this loss effects both human beings and nature. In addition, the newsletter provides information regarding meetings, seminars, and publications of interest to those concerned with conservation of forests. In keeping with the objectives of World Forest Action, this newsletter supports and draws attention to practical efforts to combat deforestation.

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World Neighbors in Action. World Neighbors, 5115 North Portland Avenue, Oklahoma City, Oklahoma 73112, USA.

A newsletter sharing information about cooperative self-help projects, published by World Neighbors, "a non-governmental, non-sectarian, worldwide people-to-people movement." Written especially for project personnel in developing countries, each issue provides practical information and advice on a specific topic, many of which concern food and nutrition. For example. "Eating Green Leafy Plants" [Vol. 11, No. 4E] describes the nutritional importance of green leafy plants and explains how a variety of these can be recognized and prepared for meals. Topics of several other recent issues include: "Oral Rehydration Treatment" [Vol. 13, No. 2E], "Food Self-Sufficiency" [Vol. 12, No. 3E], and "Let's Grow Our Own Fruit" [Vol. 7, No. 1E].

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World Water. Thomas Telford Ltd., P.O. Box 101, London EC1, United Kingdom.

The magazine reports on the progress being made on the United Nation's plan to provide everyone in the world with access to a safe supply of drinking water and adequate sanitation by 1990. Monthly.

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6.0 ORGANIZATIONS

Agricultural Cooperative Development International (ACDI), 1021 14th St., N.W., Suite 201, Washington, D.C. 20005, USA.

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The Agricultural Development Council, Inc. (A/D/C), 1290 Avenue of the Americas, New York, New York 10019, USA.

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Agricultural Extension and Rural Development Center (AERDC), The University of Reading, London Road, Reading RG1 5AQ, England, UK.

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African Rural Economy Program, Department of Agricultural Economics, Michigan State University, East Lansing, Michigan 48824, USA.

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Arid Lands Agricultural Development Program (ALAD), The Ford Foundation, P.O. Box 2379, Beirut, Lebanon.

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The Asian Vegetable Research and Development Center (AVRDC), P.O. Box 42, Shanhua, Tainan 741, Taiwan, Republic of China.

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Association of Voluntary Agencies for Rural Development (AVARD), 5 Deen Dayal Upadhyaya Marg, New Delhi 110002, India.

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Bangladesh Agricultural Research Council (BARC), 130-C, Dhanmondi Residential Area, Road No. 1, Dacca-5, Bangladesh.

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Canadian Hunger Foundation, 75 Sparks Street, Ottawa, Ontario K1P 5A5, Canada.

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Caribbean Food and Nutrition Institute (CFNI), Jamaica Centre, P.O. Box 140, Mona, Kingston 7, Jamaica, West Indies.

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Center for Agricultural and Economic Development (CAED), North Central Regional Center for Rural Development, 108 Curtiss, Iowa State University, Ames, Iowa 50011, USA.

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Center for Agricultural and Rural Development Studies (CARDS), Tamil Nadu Agricultural University, Coimbatore 641003, India.

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Center for the Analysis of World Food Issues, Program in International Agriculture, Cornell University, Roberts Hall, Ithaca, New York 14853, USA.

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Centro Internacional del Agricultura Tropical (CIAT), Apartado Aereo, 67-13, Cali, Colombia.

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Centro Internacional de Investigaciones para el Desarrollo, Officina Regional para Americana Latina y el Cribe, Apartado Aereo 53016, Bogota, D.E., Colombia.

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Centro Internacional de Majoramiento de Maiz y Trigo (International Maize and Wheat Improvement Center), CIMMYT, Apartado Postal 6-641, Londres 40, Mexico 6, D.F., Mexico.

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Commonwealth Agricultural Bureaux (CAB), Farnham House, Farnham Royal, Slough SL2 3BN, England, UK.

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Comprehensive Rural Educational Social Cultural and Economical Centre (CRESCENT), P.O. Box 2095, Dacca-2, Bangladesh.

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Institute of International Agriculture, College of Agriculture and Natural Resources, 101 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, USA.

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Environment Laison Centre, P.O. Box 72461, Nairobi, Kenya.

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Food and Agriculture Organization of the United Nations (FAO), Via Terme di Caracalla, 00100 Rome, Italy.

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The Hunger Project, 2015 Steiner Street, San Francisco, California 94115, USA.

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Institut Africain pour le Developpement Economique et Social-INADES, 08 Boite Postal 8, Abidjan, Ivory Coast.

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Institute for Food and Development Policy, 1885 Mission Street, San Francisco, California 94103, USA.

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International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), 1-11-256, Begumpet, Hyderabad 500016, A.P., India.

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International Development Research Centre (IDRC), P.O. Box 8500, Ottawa K1G 3H9, Canada.

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International Fertilizer Development Center (IFDC), P.O. Box 2040, Muscle Shoals, Alabama 35660, USA.

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International Food Policy Research Institute (IFPRI), 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036, USA.

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International Institute of Rural Reconstruction (IIRR), Silang, Cavite, Philippines D-2720.

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International Institute of Tropical Agriculture (IITA), P.M.B. 5320, Ibadan, Nigeria.

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International Livestock Center for Africa (ILCA), P.O. Box 5689, Addis Ababa, Ethiopia.

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International Potato Center (CIP), Apartado 5969, Lima Peru.

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International Rice Research Institute (IRRI), P.O. Box 933, Manila, Philippines.

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Multipurpose Cooperatives Association (MCA), 3rd Floor, Krishna Complex, Tilak Road, P.O. Box 265, Hyderabad 500001, India.

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Non-Formal Education Information Center, College of Education, 237 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, USA.

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NFE/WID Information Exchange Center for Asia, Department of Agricultural Education, College of Agriculture, University of the Philippines at Los Banos, College, Laguna, Philippines.

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Oxford Famine Relief (OXFAM), Kidlengton, Oxford OX5, 1JD, England, UK.

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Partners of the Americas, 2001 S. Street, N.W., Washington, D.C. 20009, USA.

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Program of Advanced Studies in Institution Building and Technical Assistance Methodology (PASITAM), Indiana University, 1005 East Tenth Street, Bloomington, Indiana 47401, USA.

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Project-Soya, B.P. 110, Kananga, Zaire.

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Sarvodaya Shramadana Movement, Sarvodaya Research Institute, No. 40, Lumbini Avenue, Ratmalana, Sri Lanka.

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Servicio de Intercambio de Informacion en Educacion No Formal para America Latina (SINENFAL), FEPEC/CEDEN, Apartado Aereo 53372, Bogota, D.E., Colombia.

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Southeast Asia Regional Centre for Graduate Study and Research in Agriculture (SEARCA), College of Education, University of the Philippines, Diliman, Quezon City, Philippines.

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Soya Production and Research Association (SPRA), 182 Civil Lines, Bareilly (UP), India.

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The Women and Food Information Network, 24 Peabody Terrace #1403, Cambridge, Massachusetts 02138, USA.

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World Forest Action, P.O. Box 184, London WC1, England, UK.

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World Hunger Education Service, 2035 P Street, N.W., Washington, D.C. 20036, USA.

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World Neighbors, 5115 North Portland Avenue, Oklahoma City, Oklahoma 73112, USA.

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7.0 RECENT ACQUISITIONS

Alburo, Florian A. Agricultural Modernization and Non-Agricultural Employment: An Asian and Pacific Perspective. UPSE Discussion Paper 8214. 1982. School of Economics, University of the Philippines, Diliman, Quezon City, Philippines. 31 pp.

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Bittenbender, H.C. Handbook of Tropical Vegetables. 1983. Department of Horticulture, Michigan State University, East Lansing, Michigan 48824, USA. 18 pp.

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Casley, Dennis J. and Denis A. Lury. Monitoring and Evaluation of Agriculture and Rural Development Projects. 1982. The Johns Hopkins University Press, Baltimore, Maryland 21218, USA. 145 pp.

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Gram Praudyogiki. "Technology for Horticulture Nursery and Kitchen Garden." Vol. 3, No. 1, March 1983. Centre for Rural Development and Appropriate Technology, Indian Institute of Technology, Hauz Khas, New Delhi - 110016, India. 44 pp.

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Gram Praudyogiki. "Technology for Mushroom Cultivation." Vol. 3, No. 2, June 1983. Centre for Rural Development and Appropriate Technology, Indian Institute of Technology, Hauz Khas, New Delhi - 110016, India. 44 pp.

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Halim, Abdul and Florence E. McCarthy. Women Labourers in Rural Bangladesh: A Socio-Economic Analysis. G.T.I. Pub. No. 35. 1983. Graduate Training Institute (GTI), Bangladesh Agricultural University, Mymensingh, Bangladesh. 31 pp.

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Jamison, Dean T., and Lawrence J. Lau. Farmer Education and Farm Efficiency. 1982. The Johns Hopkins University Press, Baltimore, Maryland 21218, USA. 292 pp.

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